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TABLE 13 DETAILED CONTOUR ANALYSIS RESULTS WITHIN GCNP- ALTERNATIVE E (PEAK SEASON)

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Developed		% Of Management Zone					
	>= 65	17	17	16	0	0	0
	60 to < 65	3	2	2	0	0	0
	55 to < 60	6	6	2	0	0	0
	50 to < 55	4	4	3	1	1	1
	45 to < 50	5	5	4	1	1	1
	40 to < 45	5	4	4	2	2	2
	35 to < 40	4	4	4	2	2	2
	30 to < 35	4	4	4	2	2	2
	25 to < 30	4	4	4	9	9	8
	20 to < 25	5	5	6	25	21	12
	15 to < 20	4	5	5	34	35	37
	10 to < 15	8	7	5	15	11	13
	5 to < 10	15	15	4	7	10	13
	0 to < 5	16	13	30	1	4	6
Non-Wilderness		% Of Management Zone					
	>= 65	15	15	14	0	0	0
	60 to < 65	5	4	3	0	0	0
	55 to < 60	5	5	3	0	0	0
	50 to < 55	6	6	3	1	1	1
	45 to < 50	6	6	4	1	1	1
	40 to < 45	5	5	6	2	2	2
	35 to < 40	4	4	6	2	2	2
	30 to < 35	3	3	5	2	2	2
	25 to < 30	3	3	5	11	10	7
	20 to < 25	4	4	3	30	29	17
	15 to < 20	4	5	3	11	11	26
	10 to < 15	4	4	3	10	7	6
	5 to < 10	5	4	4	27	18	9
	0 to < 5	31	14	15	2	14	21

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Proposed Wilderness		% Of Management Zone					
	>= 65	10	10	5	0	0	0
	60 to < 65	2	2	1	0	0	0
	55 to < 60	2	2	1	0	0	0
	50 to < 55	1	1	1	0	0	0
	45 to < 50	2	2	1	1	1	0
	40 to < 45	2	2	1	4	4	3
	35 to < 40	2	1	1	3	3	4
	30 to < 35	2	1	2	2	2	3
	25 to < 30	2	2	2	3	3	2
	20 to < 25	2	2	3	4	4	3
	15 to < 20	2	2	4	12	4	4
	10 to < 15	3	3	3	17	9	6
	5 to < 10	6	4	4	28	18	10
	0 to < 5	63	22	17	16	23	18
Entire Park		% Of GCNP					
	>= 65	10	10	6	0	0	0
	60 to < 65	2	2	1	0	0	0
	55 to < 60	2	2	1	0	0	0
	50 to < 55	2	2	1	0	0	0
	45 to < 50	2	2	1	1	1	0
	40 to < 45	2	2	1	4	4	3
	35 to < 40	2	2	1	3	3	4
	30 to < 35	2	2	2	2	2	3
	25 to < 30	2	2	2	3	3	3
	20 to < 25	2	2	3	6	5	3
	15 to < 20	2	2	4	12	5	5
	10 to < 15	3	3	3	16	8	6
	5 to < 10	6	4	4	27	18	10
	0 to < 5	61	21	17	15	23	18

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TABLE 14 DETAILED CONTOUR ANALYSIS RESULTS WITHIN THE SFRA - ALTERNATIVE E (PEAK SEASON)

Results Within the SFRA		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
	>= 65	N/A	N/A	N/A	0	0	0
	60 to < 65	N/A	N/A	N/A	0	0	0
	55 to < 60	N/A	N/A	N/A	0	0	0
	50 to < 55	N/A	N/A	N/A	0	0	0
	45 to < 50	N/A	N/A	N/A	1	1	0
	40 to < 45	N/A	N/A	N/A	3	3	2
	35 to < 40	N/A	N/A	N/A	3	3	3
	30 to < 35	N/A	N/A	N/A	4	4	3
	25 to < 30	N/A	N/A	N/A	5	5	4
	20 to < 25	N/A	N/A	N/A	8	7	5
	15 to < 20	N/A	N/A	N/A	16	9	8
	10 to < 15	N/A	N/A	N/A	17	12	11
	5 to < 10	N/A	N/A	N/A	20	15	13
	0 to < 5	N/A	N/A	N/A	14	17	14

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1 **TABLE 15 RESULTS FOR 127 POINT LOCATIONS - ALTERNATIVE E (PEAK SEASON) - ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE**
 2 **SFRA**

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
Marble Canyon												
1	CLDWEL	Cliff Dwellers Lodge	0	0	0	0	0	0	0	0	0	0
2	GRID01	Grid Location Point 1	0	3	0	0	0	0	3	0	0	0
3	GRID02	Grid Location Point 2	1	13	0	0	0	1	13	0	0	0
4	GRID03	Grid Location Point 3	1	7	0	0	0	1	7	0	0	0
5	GRID04	Grid Location Point 4	0	0	0	0	0	0	0	0	0	0
6	GRID05	Grid Location Point 5	0	0	0	0	0	0	0	0	0	0
7	MARBDM	Marble Canyon Dam Site	0	0	0	0	0	0	0	0	0	0
8	NOCANY	North Canyon	0	0	0	0	0	0	0	0	0	0
9	SOCAN	South Canyon	0	0	0	0	0	0	0	0	0	0
East End												
10	96MILE	96 Mile Camp	0	8	0	0	0	0	8	0	0	0
11	BASCMP	Bass Camp	0	0	0	0	0	0	1	0	0	0
12	BASIN	The Basin	1	5	0	0	0	1	5	0	0	0
13	BRTANG	Bright Angel Point	5	13	0	0	0	1	11	0	0	0
14	CAPROY	Cape Royal	77	26	0	0	0	25	20	0	0	0
15	CEDRIG	Cedar Ridge	40	14	0	0	0	4	11	0	0	0
16	DSRTVW	Desert View	87	32	11	0	0	53	26	0	0	0
17	ELTOVR	El Tovar	8	7	0	0	0	9	8	0	0	0
18	GC008	Pasture Wash (pinyon-juniper)	28	16	0	0	0	31	17	0	0	0
19	GC011	South Rim (ponderosa pine)	12	21	0	0	0	10	20	0	0	0
20	GC015	Rainbow Plateau (ponderosa pine)	0	2	0	0	0	0	3	0	0	0
21	GC031	Eremita Mesa	67	21	0	0	0	49	22	0	0	0
22	GC032	1.5 km SE of Moran Point	81	53	36	11	5	61	51	31	11	4

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
23	GRID06	Grid Location Point 6	0	3	0	0	0	0	3	0	0	0
24	GRID07	Grid Location Point 7	0	2	0	0	0	0	3	0	0	0
25	GRID10	Grid Location Point 10	0	9	0	0	0	0	10	0	0	0
26	GRID11	Grid Location Point 11	6	9	0	0	0	8	9	0	0	0
27	GRID12	Grid Location Point 12	1	12	0	0	0	1	12	0	0	0
28	GRID13	Grid Location Point 13	1	10	0	0	0	1	9	0	0	0
29	GRID14	Grid Location Point 14	81	39	28	7	0	66	35	19	2	0
30	GRID15	Grid Location Point 15	34	18	0	0	0	11	16	0	0	0
31	GRID16	Grid Location Point 16	17	12	0	0	0	23	13	0	0	0
32	GRID17	Grid Location Point 17	80	21	0	0	0	18	14	0	0	0
33	GRID18	Grid Location Point 18	1	6	0	0	0	1	6	0	0	0
34	GRID19	Grid Location Point 19	56	34	14	0	0	19	30	9	0	0
35	HBASIN	Hermit Basin	13	10	0	0	0	16	10	0	0	0
36	LIPAN	Lipan Point	88	40	33	7	0	62	36	24	2	0
37	LITCOL	Little Colorado	0	12	0	0	0	0	8	0	0	0
38	LTCORV	Little Colorado River	36	39	36	6	0	30	34	27	0	0
39	NANMES	Nankoweap Mesa	78	23	0	0	0	45	19	0	0	0
40	NANRIV	Nankoweap at River	0	12	0	0	0	0	12	0	0	0
41	NAVA1	Navajo 1	1	13	0	0	0	1	8	0	0	0
42	NAVA2	Navajo 2	2	11	0	0	0	0	4	0	0	0
43	PHANTM	Phantom Ranch	1	7	0	0	0	1	6	0	0	0
44	PTIMPR	Point Imperial	31	11	0	0	0	1	8	0	0	0
45	PTSUBL	Point Sublime	46	16	0	0	0	29	17	0	0	0
46	RANCH	The Ranch	37	24	0	0	0	40	25	0	0	0
47	TEMBUT	Temple Butte	75	38	19	5	0	57	35	17	2	0
48	TENMED	Ten X Meadow	76	48	54	15	5	54	46	46	12	4
49	TOWER	Tower of Ra	1	8	0	0	0	1	8	0	0	0
50	TUSAYN	Tusayan	84	42	26	9	1	50	40	26	8	0
51	ZUNALF	Zuni Alpha	63	52	34	12	5	38	50	27	11	4
52	ZUNCHR	Zuni Charlie	67	30	7	0	0	46	23	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
Central												
53	COYCAN	Coyote Canyon	0	16	0	0	0	0	16	0	0	0
54	DOME	The Dome	1	12	0	0	0	1	12	0	0	0
55	GC009	Tuweep (warm desert scrub)	13	15	0	0	0	0	16	0	0	0
56	GC010	Tuweep (cold desert scrub)	5	8	0	0	0	0	9	0	0	0
57	GC016	Hancock Knolls (pinyon-juniper)	2	9	0	0	0	2	9	0	0	0
58	GC017	1 km W of Kanab Point (cold desert scrub)	2	6	0	0	0	2	7	0	0	0
59	GC033	Fossil Canyon	1	9	0	0	0	1	9	0	0	0
60	GRID08	Grid Location Point 8	1	9	0	0	0	1	10	0	0	0
61	GRID09	Grid Location Point 9	1	3	0	0	0	1	3	0	0	0
62	GRID20	Grid Location Point 20	0	4	0	0	0	0	4	0	0	0
63	GRID21	Grid Location Point 21	2	13	0	0	0	2	14	0	0	0
64	GRID22	Grid Location Point 22	1	8	0	0	0	1	9	0	0	0
65	GRID23	Grid Location Point 23	2	9	0	0	0	2	9	0	0	0
66	GRID24	Grid Location Point 24	2	5	0	0	0	2	6	0	0	0
67	GRID25	Grid Location Point 25	2	7	0	0	0	2	7	0	0	0
68	GRID26	Grid Location Point 26	1	9	0	0	0	1	10	0	0	0
69	GRID35	Grid Location Point 35	0	1	0	0	0	0	1	0	0	0
70	GRID36	Grid Location Point 36	0	0	0	0	0	0	0	0	0	0
71	HAVAPT	Havasupai Point	0	0	0	0	0	0	0	0	0	0
72	HAVCAN	Havataagvitch Canyon	1	7	0	0	0	1	7	0	0	0
73	KANAPT	Kanab Point	1	7	0	0	0	1	8	0	0	0
74	MOHAWK	Mohawk Canyon	0	8	0	0	0	0	8	0	0	0
75	MOHCAN	Mohawk Canyon	0	5	0	0	0	0	6	0	0	0
76	MTSINY	Mt. Sinyala	1	0	0	0	0	1	0	0	0	0
77	NATCAN	National Canyon	1	7	0	0	0	1	7	0	0	0
78	PROCAN	Prospect Canyon	0	9	0	0	0	0	11	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
79	PRSPCT	Prospect Canyon	15	18	0	0	0	16	18	0	0	0
80	SOSUPC	South Supai Canyon	1	18	0	0	0	2	19	0	0	0
81	STONCK	Stone Creek	0	0	0	0	0	0	0	0	0	0
82	SUPVIL	Supai Village	0	5	0	0	0	0	5	0	0	0
83	SURPVA	Surprise Valley	1	0	0	0	0	1	0	0	0	0
84	TOROWP	Toroweap Overlook	0	14	0	0	0	0	15	0	0	0
85	TWPRS	Tuweep Ranger Station	3	6	0	0	0	1	6	0	0	0
86	UPDRCK	Upper Deer Creek	1	0	0	0	0	1	0	0	0	0
West End												
87	ADMIN	NPS Administration site	16	20	0	0	0	2	21	0	0	0
88	ANDRUS	Andrus Canyon	50	37	21	2	0	57	36	31	1	0
89	BATCAV	Bat Cave	92	47	70	28	4	84	46	65	23	4
90	BRNTSP	Burnt Springs Canyon	70	46	63	21	3	62	43	56	13	1
91	CASTLE	Castle Peak	45	22	0	0	0	50	23	0	0	0
92	DIACRK	Diamond Creek	0	0	0	0	0	0	0	0	0	0
93	GC018	Separation Canyon (warm desert scrub)	0	9	0	0	0	1	9	0	0	0
94	GCWEST	Grand Canyon West	92	35	21	0	0	81	32	14	0	0
95	GRAGOR	Granite Gorge	57	34	9	2	0	48	32	8	1	0
96	GRID27	Grid Location Point 27	10	19	0	0	0	11	19	0	0	0
97	GRID28	Grid Location Point 28	5	16	0	0	0	3	17	0	0	0
98	GRID29	Grid Location Point 29	7	12	0	0	0	4	13	0	0	0
99	GRID30	Grid Location Point 30	38	28	2	0	0	13	23	2	0	0
100	GRID31	Grid Location Point 31	2	12	0	0	0	2	12	0	0	0
101	GRID32	Grid Location Point 32	4	21	1	0	0	5	22	1	0	0
102	GRID33	Grid Location Point 33	80	42	24	8	0	53	37	20	4	0
103	GRID34	Grid Location Point 34	0	1	0	0	0	0	1	0	0	0
104	GRNTPK	Granite Peak	2	15	0	0	0	2	16	0	0	0
105	GUSPLT	Gus Plateau	25	22	1	0	0	22	23	1	0	0
106	HFCAN	Horse Flat Canyon	3	13	0	0	0	1	12	0	0	0
107	KELLPT	Kelly Point	1	10	0	0	0	1	10	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
108	MERIWH	Meriwhitca	0	7	0	0	0	1	7	0	0	0
109	MTDELL	Mt. Dellenbaugh	1	18	0	0	0	1	18	0	0	0
110	NONAME	Jackson Canyon	18	24	1	0	0	5	23	1	0	0
111	PARWAS	Parashant Wash	11	25	1	0	0	14	24	0	0	0
112	PMPKIN	Pumpkin Springs	0	7	0	0	0	0	7	0	0	0
113	PSCNNO	Peach Spring Canyon North	0	4	0	0	0	0	4	0	0	0
114	PSCNSO	Peach Spring Canyon South	NA	0	0	0	0	NA	0	0	0	0
115	QMPNT	Quartermaster Point	71	45	48	19	1	65	44	44	18	0
116	SADMTN	Saddle Mountain	1	13	0	0	0	1	10	0	0	0
117	SANUP	Sanup	64	26	2	0	0	26	20	0	0	0
118	SCCORV	Separation Canyon, 1km N of Colorado River	1	8	0	0	0	1	8	0	0	0
119	SCMCIG	Spencer/Meriwhitca Canyons	0	4	0	0	0	0	4	0	0	0
120	SEPARC	Separation Canyon at Colorado River	0	7	0	0	0	0	7	0	0	0
121	SHWZFC	Shivwitz Fire Camp	1	18	0	0	0	2	19	0	0	0
122	SPENCA	Spencer Canyon	0	6	0	0	0	0	6	0	0	0
123	SUIPNT	Suicide Point	3	20	1	0	0	4	21	1	0	0
124	THRSPR	Three Springs	1	8	0	0	0	2	8	0	0	0
125	TWINPT	Twin Point	14	21	1	0	0	6	22	1	0	0
126	WESEND	West End	51	39	35	7	0	29	35	24	0	0
127	WHTRAP	Whitmore Rapids	20	28	3	0	0	21	28	2	0	0

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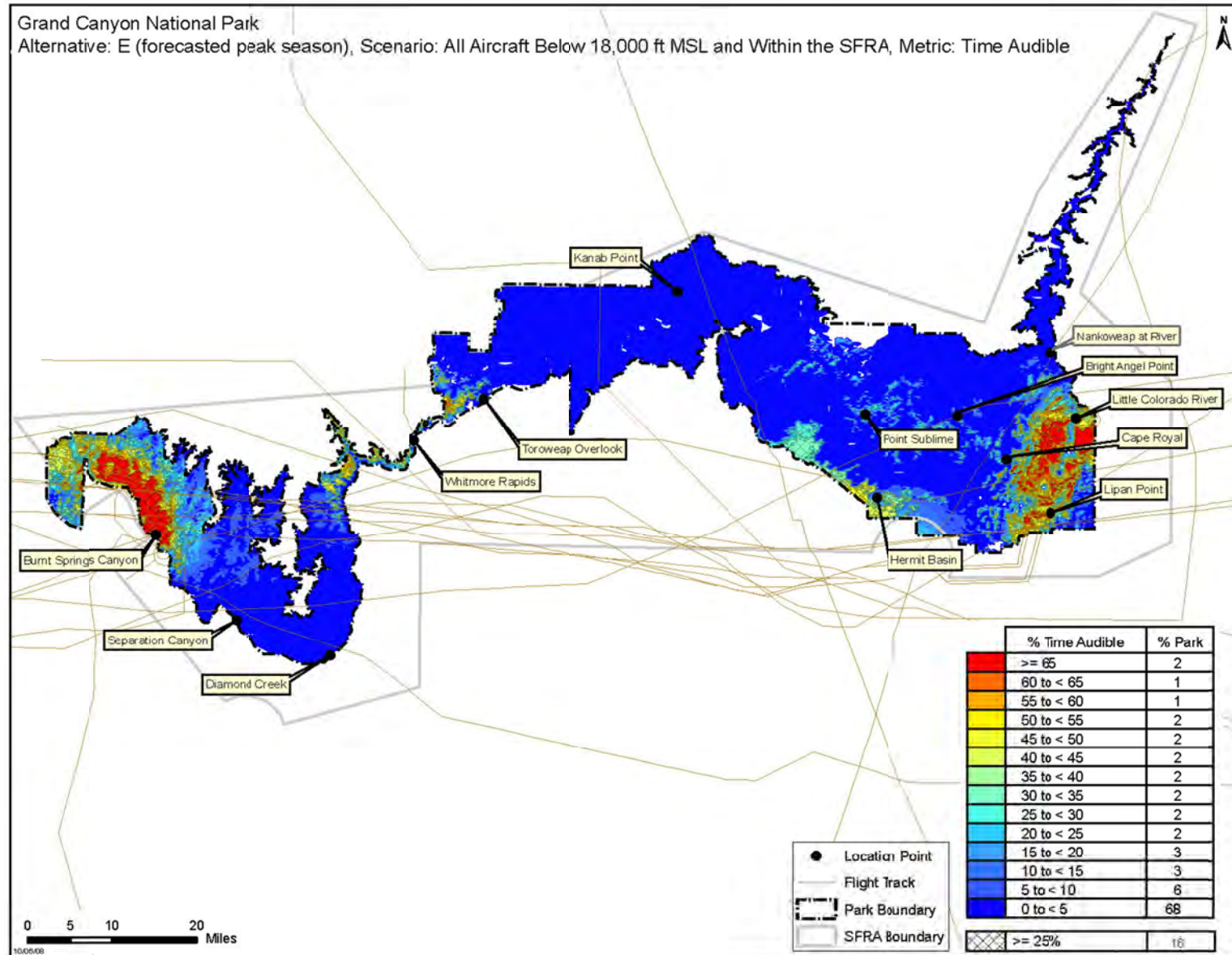


FIGURE 21 ALTERNATIVE E (TEN-YEAR FORECASTED PEAK SEASON) – %TAUD CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

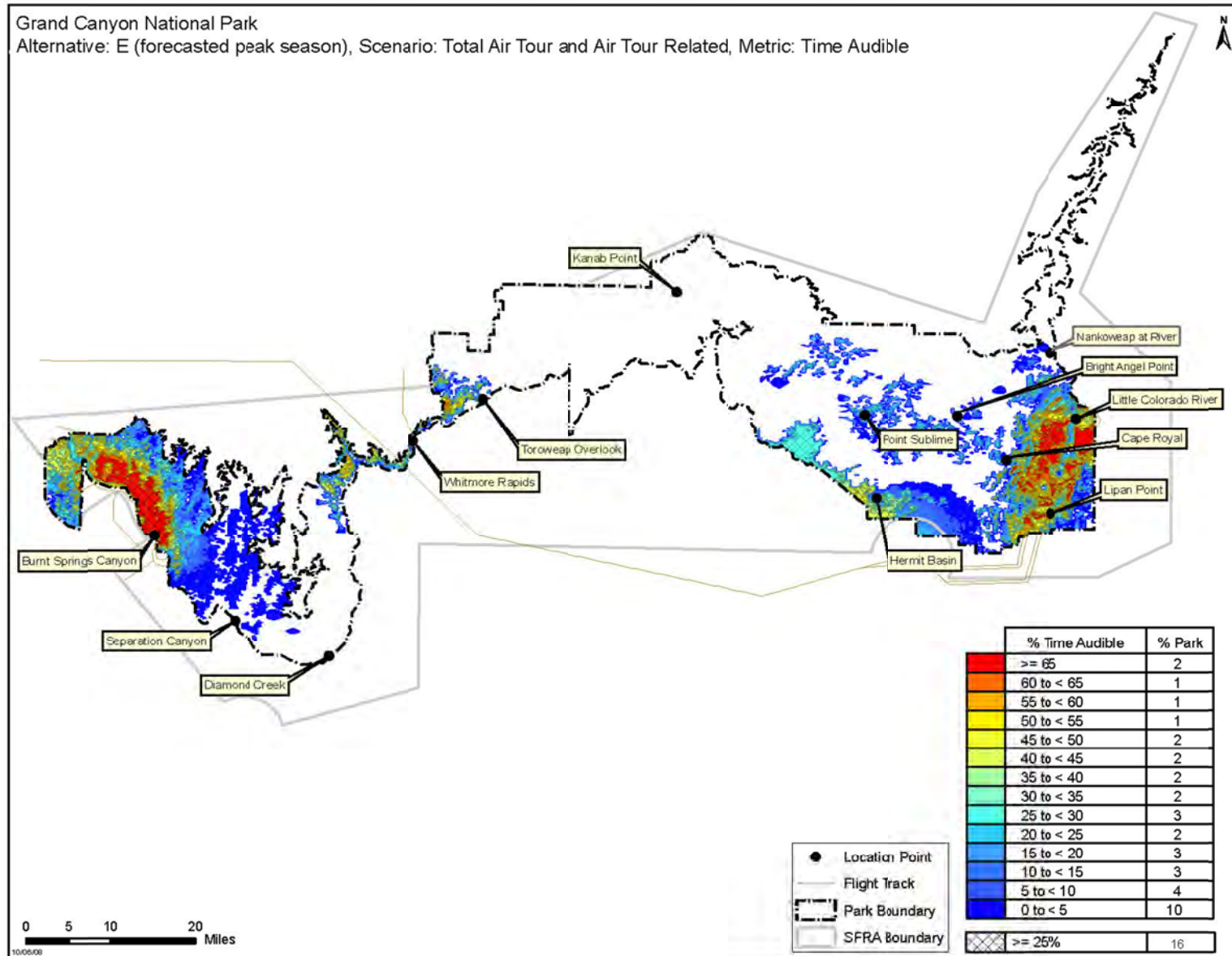


FIGURE 22 ALTERNATIVE E (TEN-YEAR FORECASTED PEAK SEASON) – %TAUD CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

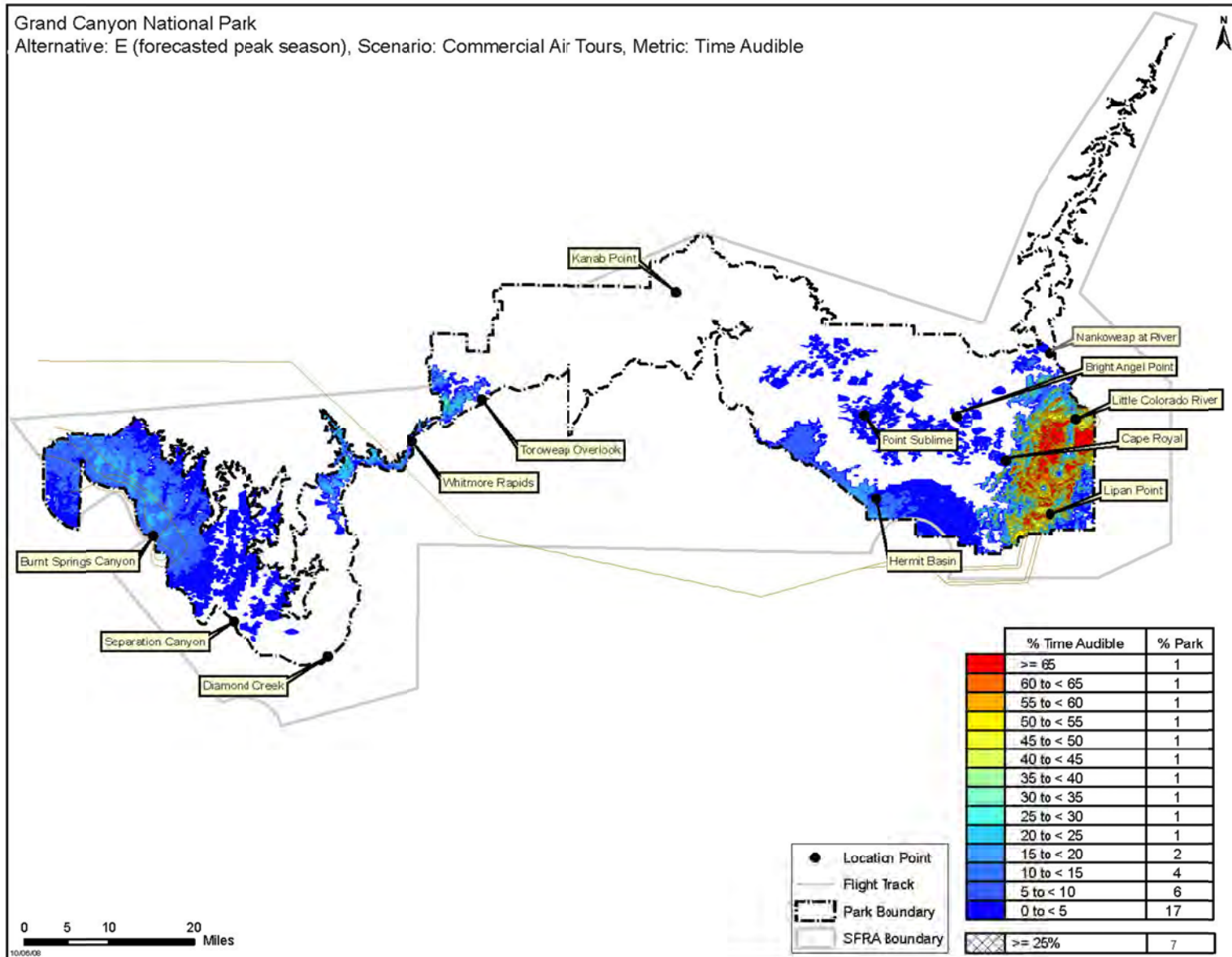


FIGURE 23 ALTERNATIVE E (TEN-YEAR FORECASTED PEAK SEASON) – %TAUD CONTOURS – COMMERCIAL AIR-TOURS

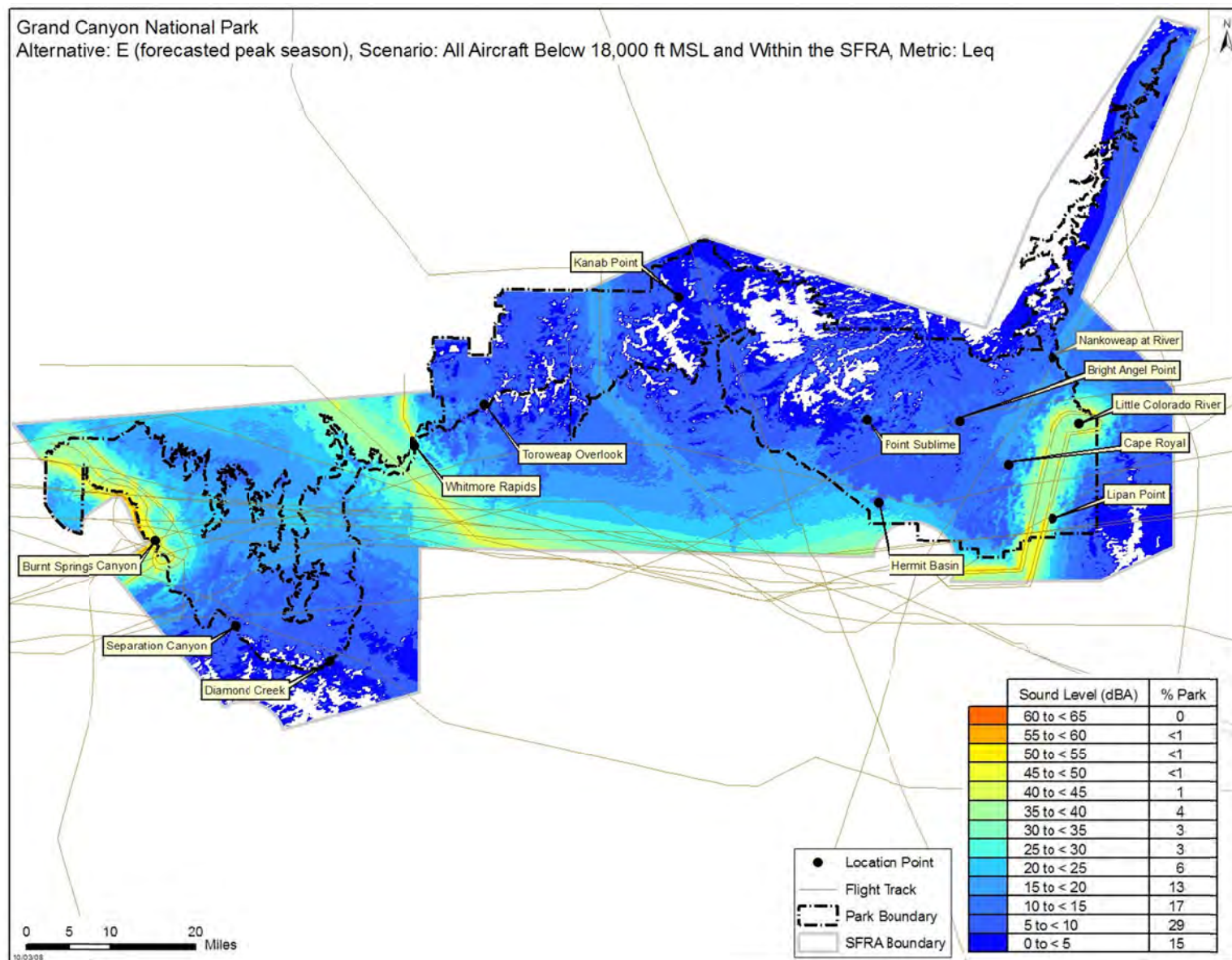


FIGURE 24 ALTERNATIVE E (TEN-YEAR FORECASTED PEAK SEASON) – L_{AEQ12} CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

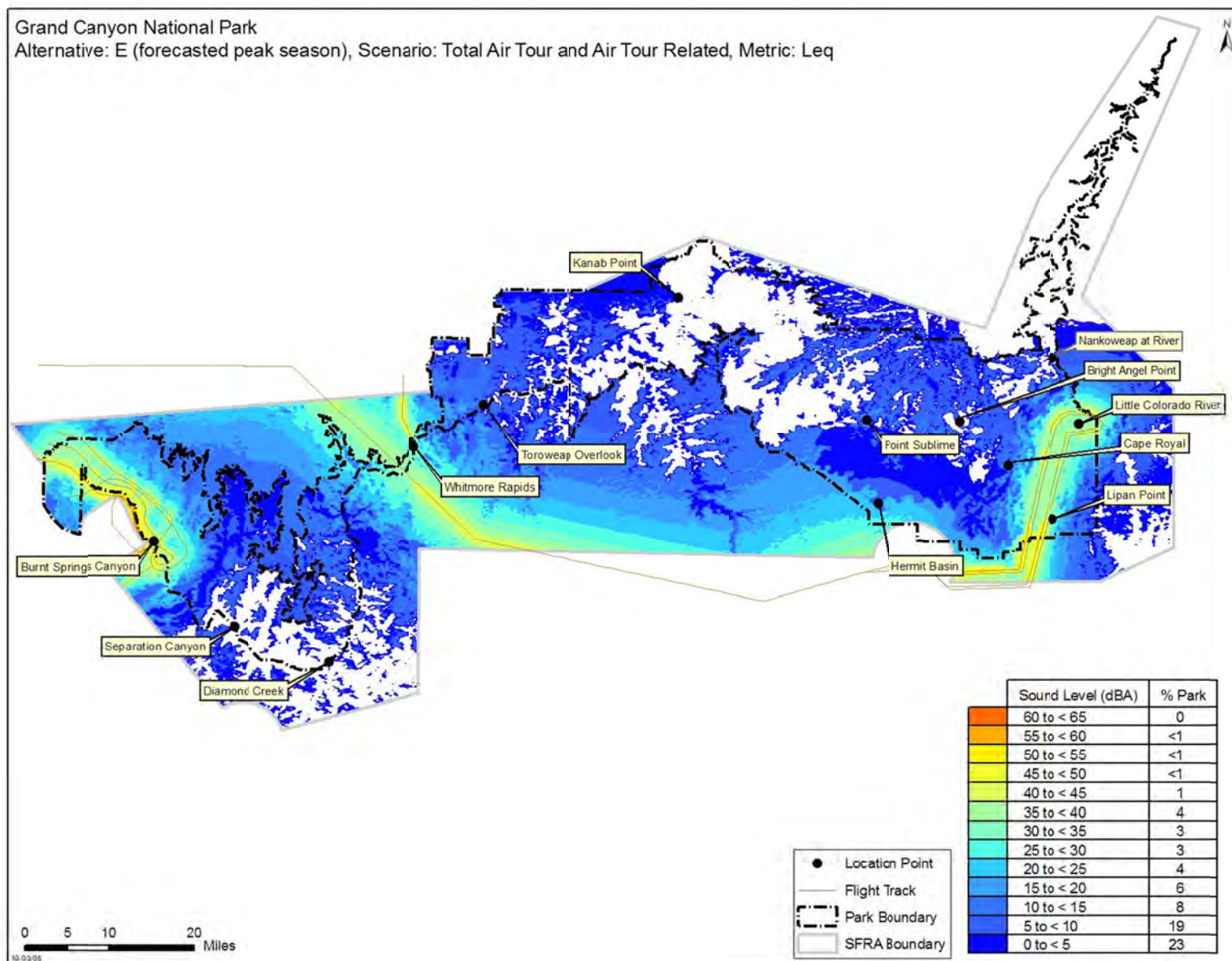


FIGURE 25 ALTERNATIVE E (TEN-YEAR FORECASTED PEAK SEASON) – L_{AEQ12} CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

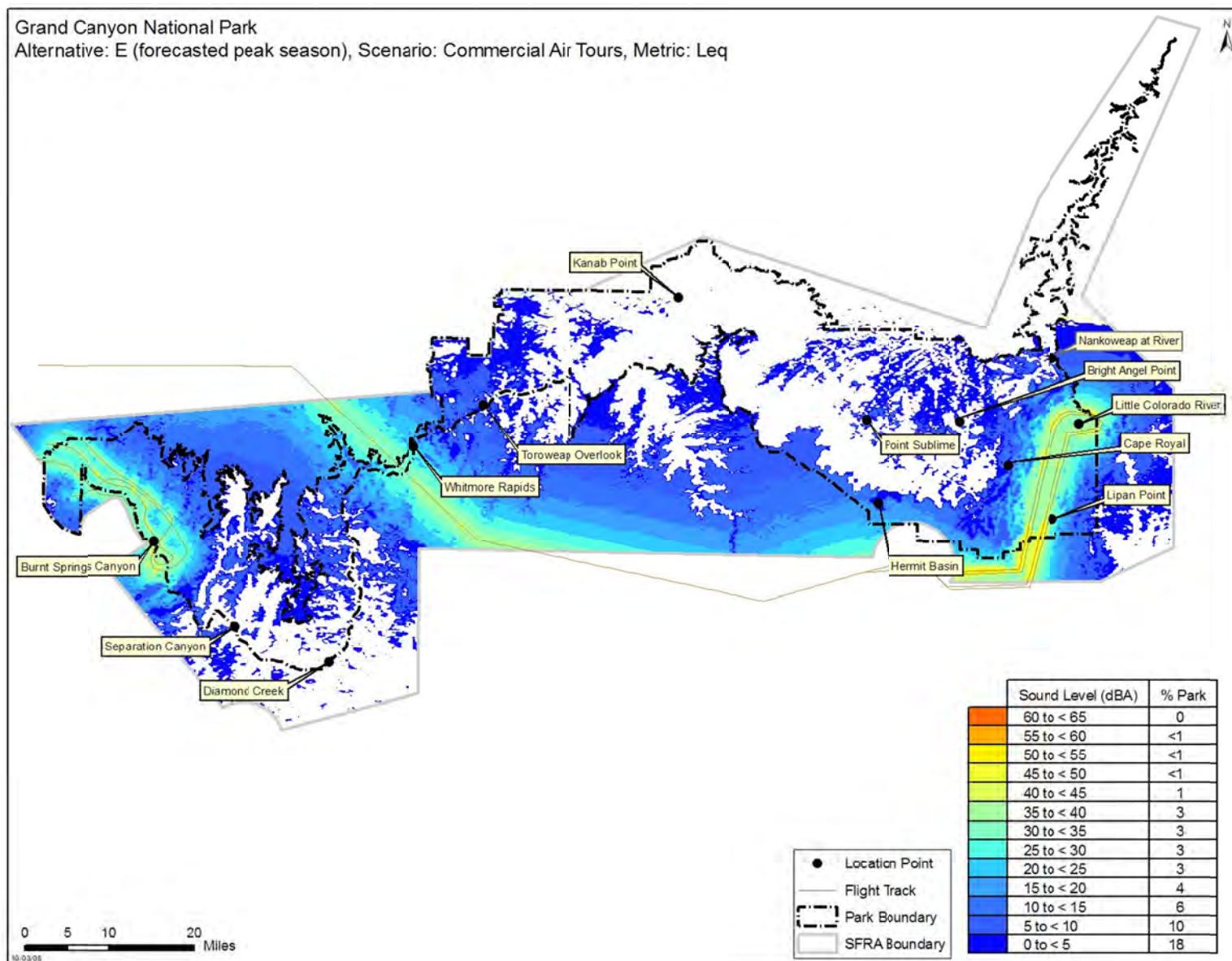


FIGURE 26 ALTERNATIVE E (TEN-YEAR FORECASTED PEAK SEASON) – L_{AEQ12} CONTOURS – COMMERCIAL AIR-TOURS

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TABLE 16 DETAILED CONTOUR ANALYSIS RESULTS WITHIN GCNP- ALTERNATIVE E (PEAK SEASON) FOR THE TEN-YEAR FORECAST

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Developed		% Of Management Zone					
	>= 65	0	0	0	0	0	0
	60 to < 65	0	0	0	0	0	0
	55 to < 60	2	2	1	0	0	0
	50 to < 55	4	4	4	1	1	1
	45 to < 50	3	3	4	1	1	1
	40 to < 45	2	2	2	2	2	2
	35 to < 40	2	2	1	2	2	2
	30 to < 35	4	3	1	2	2	2
	25 to < 30	8	7	1	5	5	2
	20 to < 25	7	8	1	24	23	7
	15 to < 20	9	9	1	38	35	18
	10 to < 15	16	14	2	16	12	38
	5 to < 10	16	16	10	8	11	10
	0 to < 5	25	12	54	1	6	11
Non-Wilderness		% Of Management Zone					
	>= 65	0	0	0	0	0	0
	60 to < 65	0	0	0	0	0	0
	55 to < 60	1	1	1	0	0	0
	50 to < 55	2	2	2	1	1	1
	45 to < 50	2	1	1	1	1	1
	40 to < 45	5	4	1	2	2	2
	35 to < 40	4	5	1	1	1	1
	30 to < 35	4	3	1	2	2	1
	25 to < 30	4	5	1	8	8	2
	20 to < 25	3	3	1	22	21	8
	15 to < 20	5	5	3	16	16	27
	10 to < 15	10	9	7	11	8	13
	5 to < 10	15	13	10	31	19	7
	0 to < 5	44	17	40	4	17	15

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Proposed Wilderness		% Of Management Zone					
	>= 65	3	2	1	0	0	0
	60 to < 65	1	1	1	0	0	0
	55 to < 60	1	1	1	0	0	0
	50 to < 55	2	1	1	0	0	0
	45 to < 50	2	2	1	0	0	0
	40 to < 45	2	2	1	1	1	0
	35 to < 40	2	2	1	4	4	3
	30 to < 35	2	1	1	3	3	3
	25 to < 30	2	3	1	3	2	3
	20 to < 25	2	2	1	5	3	2
	15 to < 20	2	2	2	13	5	3
	10 to < 15	3	3	4	17	8	5
	5 to < 10	6	3	6	29	19	10
	0 to < 5	69	11	17	15	24	18
Entire Park		% Of GCNP					
	>= 65	2	2	1	0	0	0
	60 to < 65	1	1	1	0	0	0
	55 to < 60	1	1	1	0	0	0
	50 to < 55	2	1	1	0	0	0
	45 to < 50	2	2	1	0	0	0
	40 to < 45	2	2	1	1	1	1
	35 to < 40	2	2	1	4	4	3
	30 to < 35	2	2	1	3	3	3
	25 to < 30	2	3	1	3	3	3
	20 to < 25	2	2	1	6	4	3
	15 to < 20	3	3	2	13	6	4
	10 to < 15	3	3	4	17	9	6
	5 to < 10	6	4	6	29	19	10
	0 to < 5	68	10	17	15	23	18

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TABLE 17 DETAILED CONTOUR ANALYSIS RESULTS WITHIN THE SFRA - ALTERNATIVE E (PEAK SEASON) FOR THE TEN-YEAR FORECAST

Results Within the SFRA		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
	>= 65	N/A	N/A	N/A	0	0	0
	60 to < 65	N/A	N/A	N/A	0	0	0
	55 to < 60	N/A	N/A	N/A	0	0	0
	50 to < 55	N/A	N/A	N/A	0	0	0
	45 to < 50	N/A	N/A	N/A	0	0	0
	40 to < 45	N/A	N/A	N/A	2	2	1
	35 to < 40	N/A	N/A	N/A	4	4	2
	30 to < 35	N/A	N/A	N/A	4	4	3
	25 to < 30	N/A	N/A	N/A	5	5	4
	20 to < 25	N/A	N/A	N/A	9	7	5
	15 to < 20	N/A	N/A	N/A	16	9	7
	10 to < 15	N/A	N/A	N/A	16	11	9
	5 to < 10	N/A	N/A	N/A	22	15	12
	0 to < 5	N/A	N/A	N/A	14	18	15

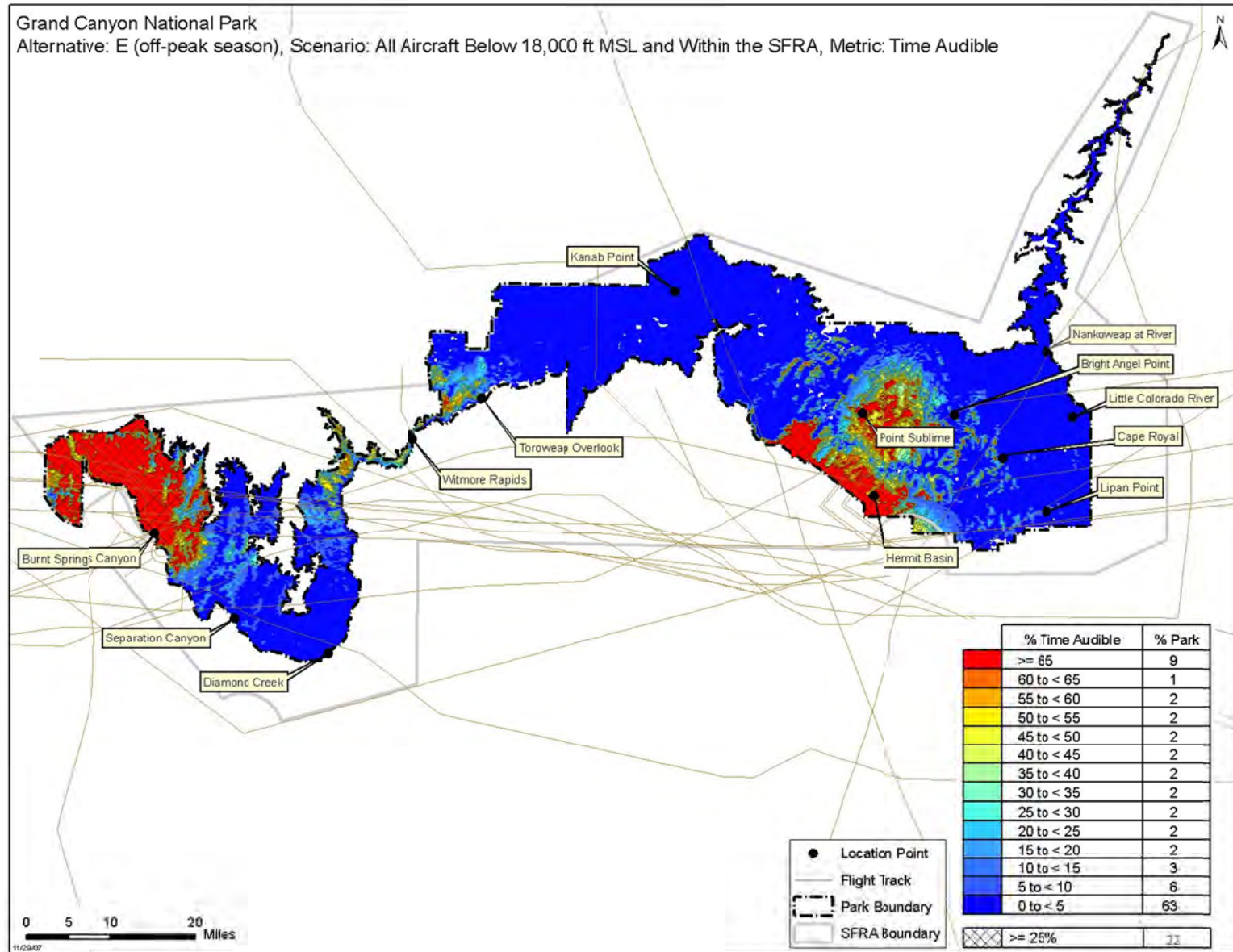


FIGURE 27 ALTERNATIVE E (OFF-PEAK SEASON) – %TAUD CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

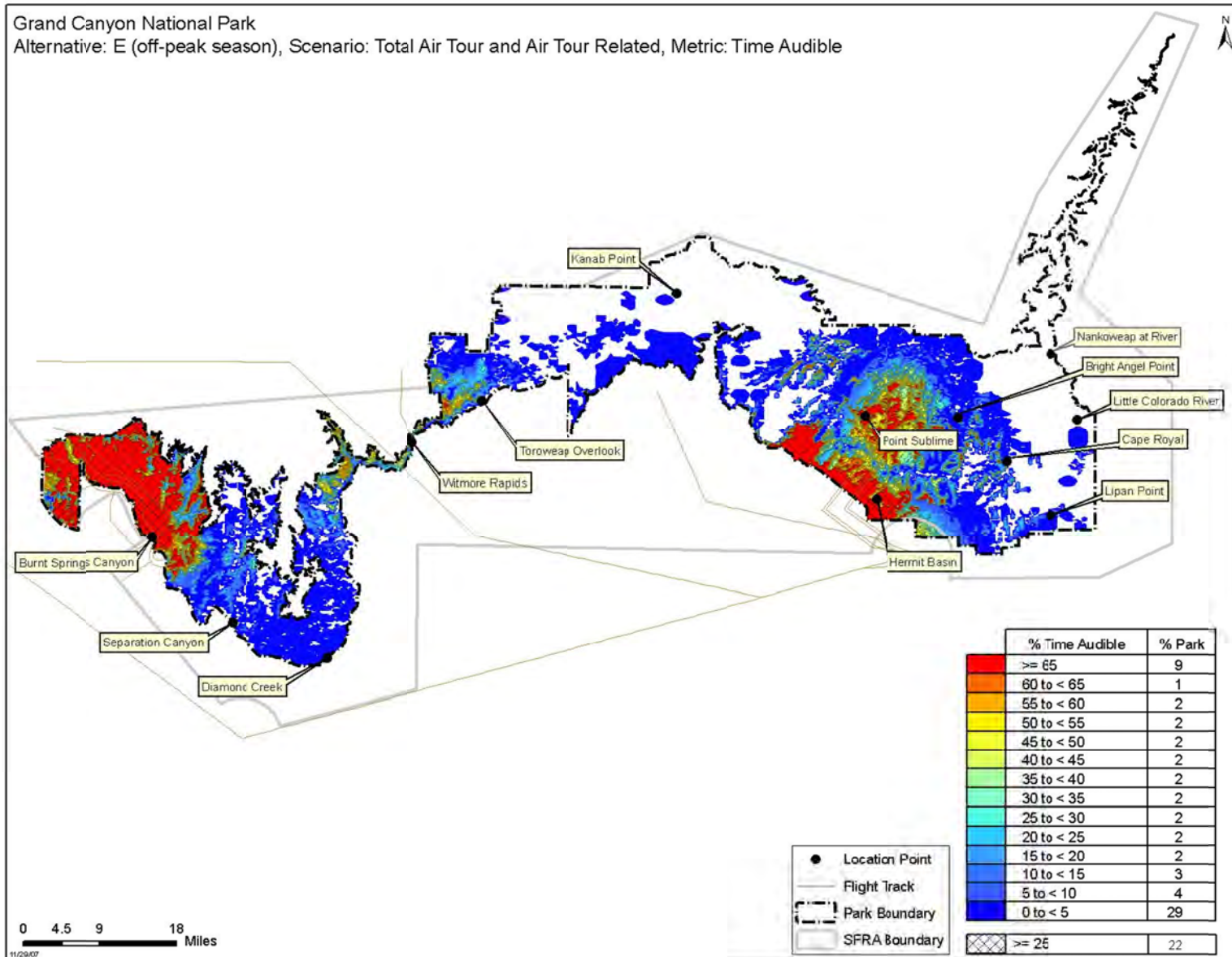


FIGURE 28 ALTERNATIVE E (OFF-PEAK SEASON) – %TAUD CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

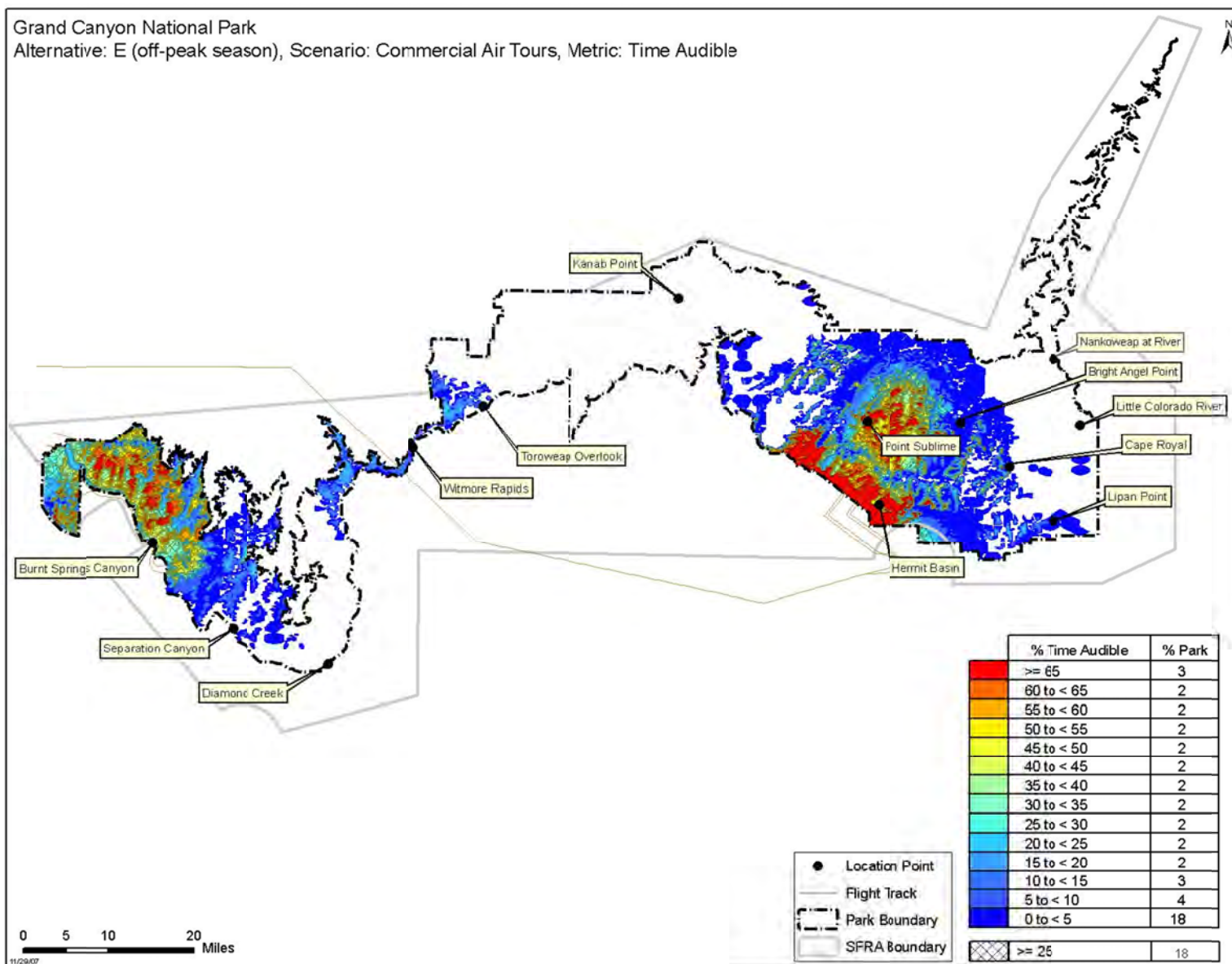


FIGURE 29 ALTERNATIVE E (OFF-PEAK SEASON) – %TAUD CONTOURS – COMMERCIAL AIR-TOURS

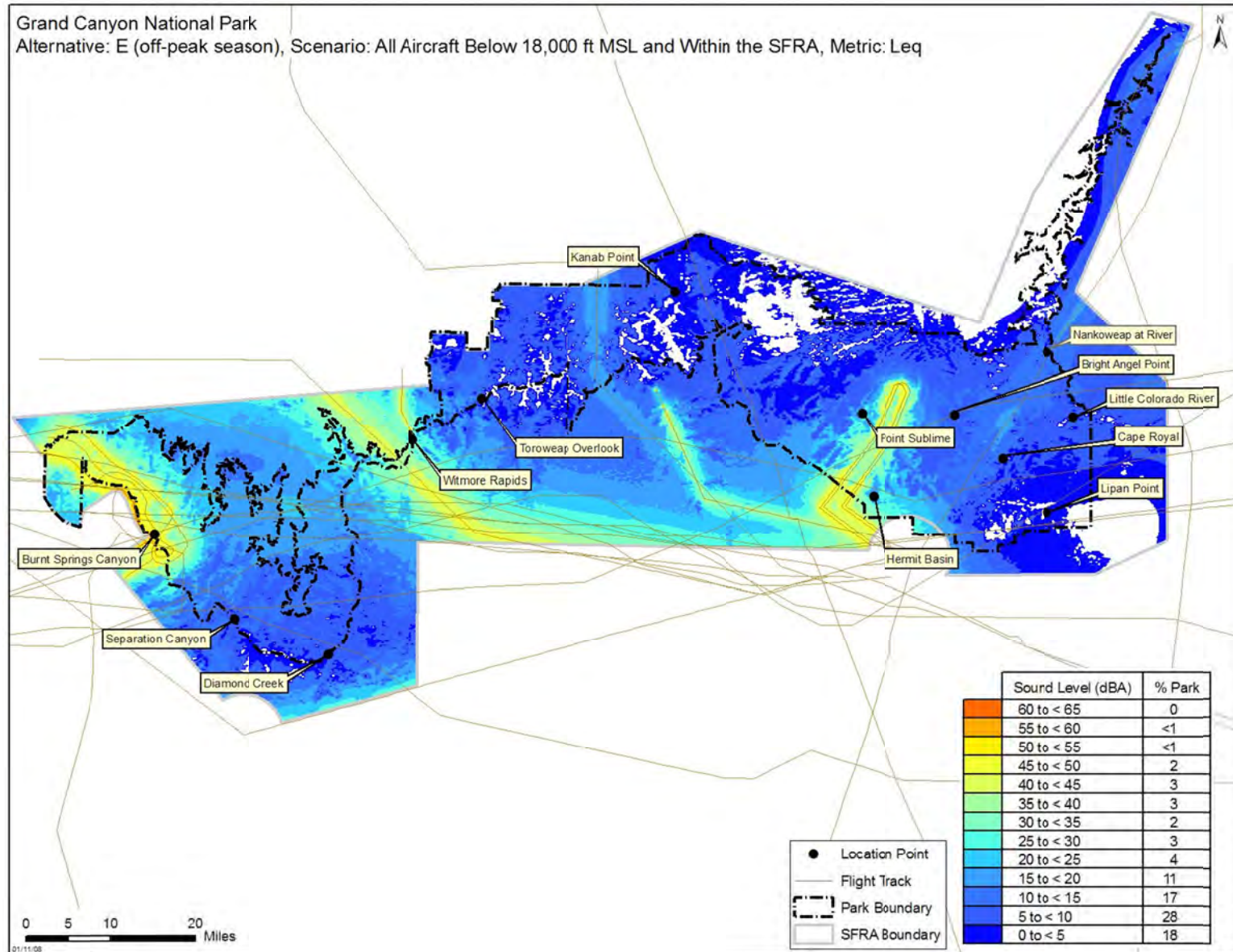


FIGURE 30 ALTERNATIVE E (OFF-PEAK SEASON) – L_{AEQ12} CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

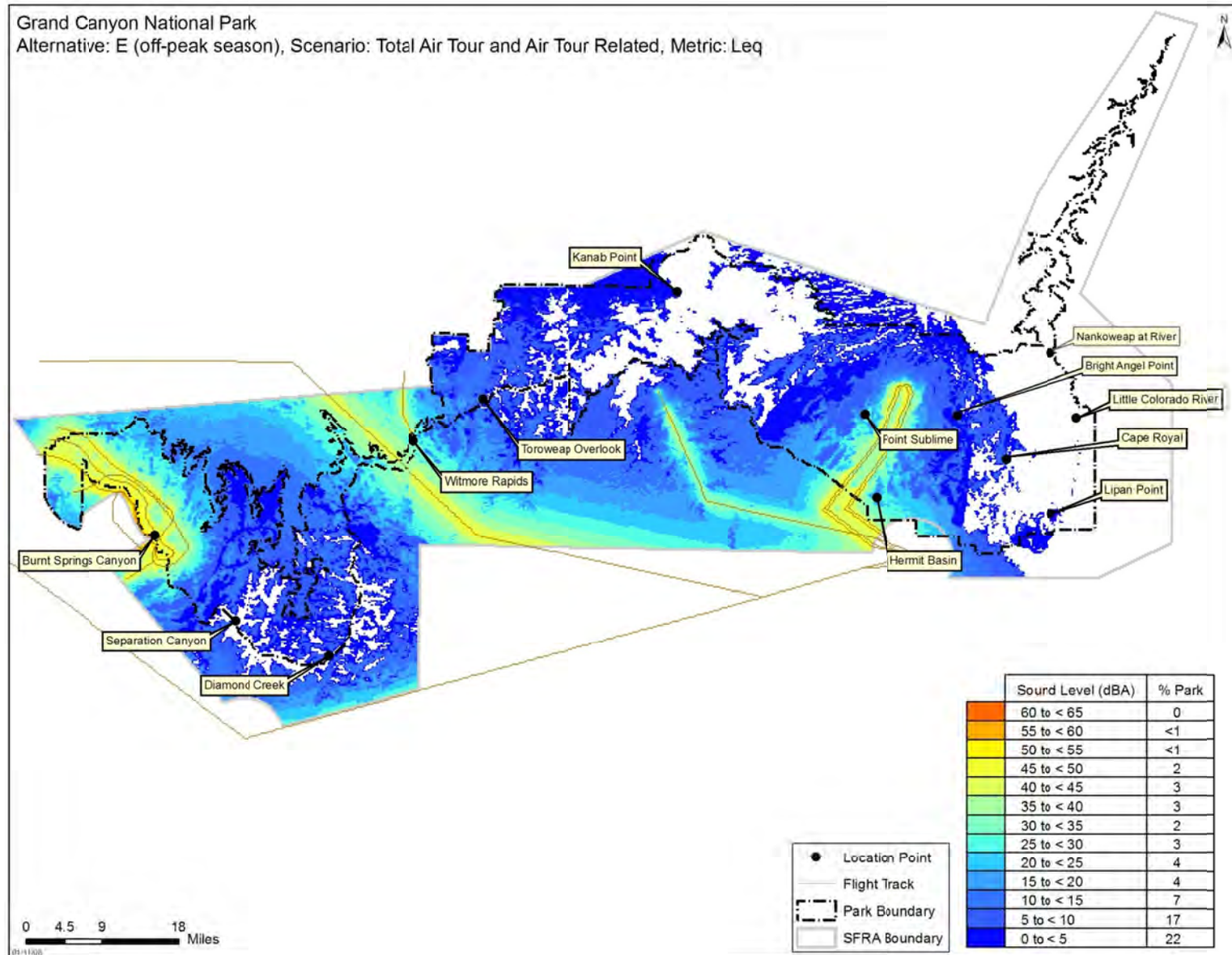


FIGURE 31 ALTERNATIVE E (OFF-PEAK SEASON) – L_{AEQ12} CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

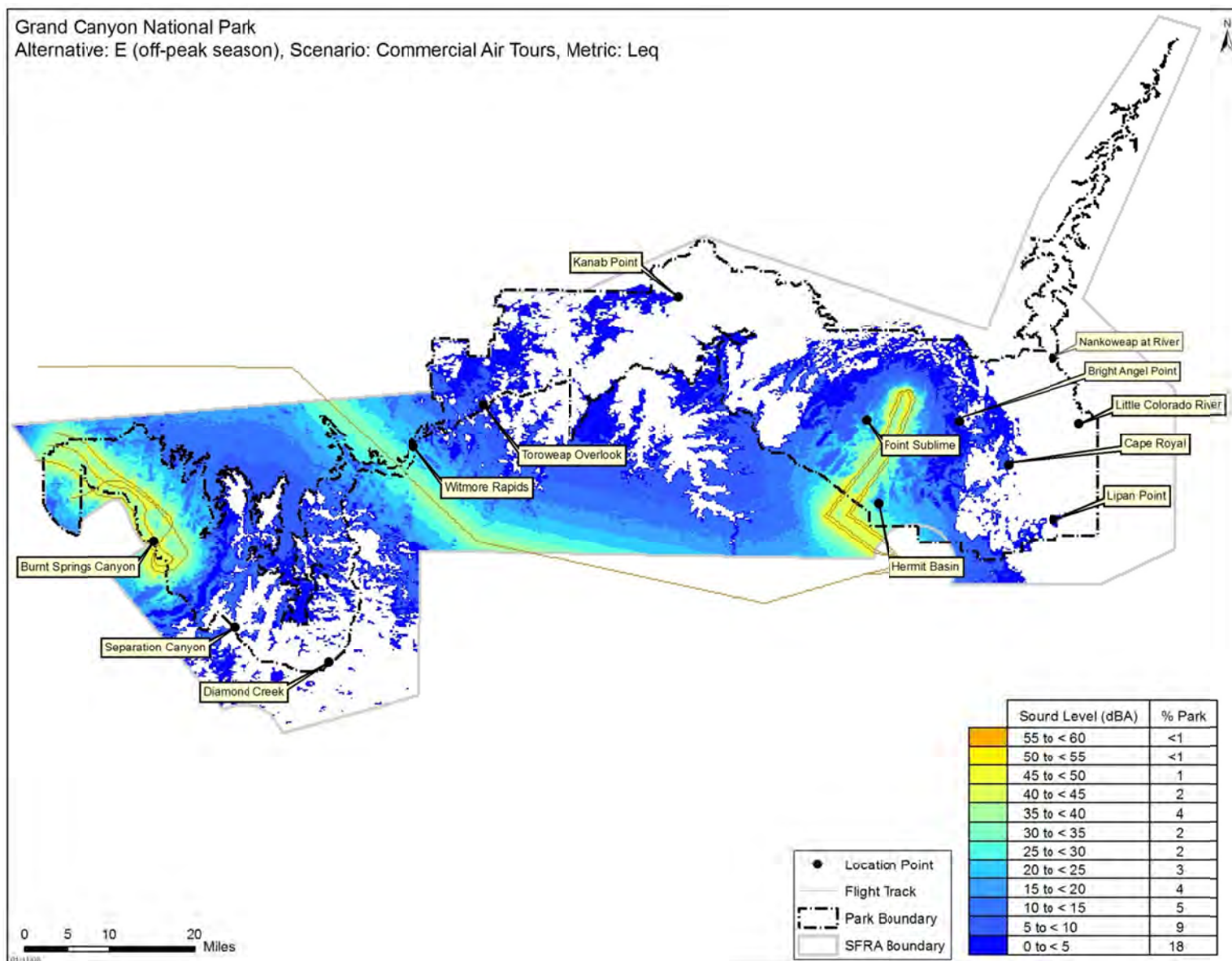


FIGURE 32 ALTERNATIVE E (OFF-PEAK SEASON) – L_{AEQ12} CONTOURS – COMMERCIAL AIR-TOURS

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TABLE 18 DETAILED CONTOUR ANALYSIS RESULTS WITHIN GCNP- ALTERNATIVE E (OFF-PEAK SEASON)

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Developed		% Of Management Zone					
	>= 65	14	13	9	0	0	0
	60 to < 65	2	2	3	0	0	0
	55 to < 60	2	2	3	0	0	0
	50 to < 55	2	2	2	0	0	0
	45 to < 50	2	2	2	0	0	0
	40 to < 45	2	2	2	0	0	0
	35 to < 40	3	3	2	0	0	0
	30 to < 35	2	2	2	0	0	0
	25 to < 30	3	3	3	5	5	2
	20 to < 25	3	3	2	27	26	9
	15 to < 20	4	4	2	20	19	32
	10 to < 15	10	9	3	14	9	12
	5 to < 10	13	14	5	16	13	11
	0 to < 5	36	31	51	16	16	17
Non-Wilderness		% Of Management Zone					
	>= 65	12	12	10	0	0	0
	60 to < 65	1	1	1	0	0	0
	55 to < 60	1	1	1	0	0	0
	50 to < 55	1	1	1	0	0	0
	45 to < 50	1	1	1	0	0	0
	40 to < 45	3	2	1	0	0	0
	35 to < 40	3	3	2	1	1	1
	30 to < 35	3	3	2	3	3	2
	25 to < 30	2	2	3	8	8	3
	20 to < 25	4	3	3	12	12	11
	15 to < 20	4	4	3	14	12	13
	10 to < 15	5	5	3	12	8	11
	5 to < 10	10	9	7	25	21	14
	0 to < 5	49	34	41	17	17	20

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Proposed Wilderness		% Of Management Zone					
	>= 65	9	9	3	0	0	0
	60 to < 65	1	1	2	0	0	0
	55 to < 60	2	2	2	0	0	0
	50 to < 55	2	2	2	0	0	0
	45 to < 50	2	2	2	2	2	1
	40 to < 45	2	2	2	3	3	2
	35 to < 40	2	2	2	3	3	4
	30 to < 35	2	2	2	2	2	2
	25 to < 30	2	2	2	3	3	2
	20 to < 25	2	2	2	4	3	3
	15 to < 20	2	2	2	11	4	3
	10 to < 15	3	3	3	17	7	5
	5 to < 10	6	4	4	29	16	9
	0 to < 5	64	29	17	19	23	18
Entire Park		% Of GCNP					
	>= 65	9	9	3	0	0	0
	60 to < 65	1	1	2	0	0	0
	55 to < 60	2	2	2	0	0	0
	50 to < 55	2	2	2	0	0	0
	45 to < 50	2	2	2	2	2	1
	40 to < 45	2	2	2	3	3	2
	35 to < 40	2	2	2	3	3	4
	30 to < 35	2	2	2	2	2	2
	25 to < 30	2	2	2	3	3	2
	20 to < 25	2	2	2	4	4	3
	15 to < 20	2	2	2	11	4	4
	10 to < 15	3	3	3	17	7	5
	5 to < 10	6	4	4	28	17	9
	0 to < 5	63	29	18	18	22	18

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TABLE 19 DETAILED CONTOUR ANALYSIS RESULTS WITHIN THE SFRA - ALTERNATIVE E (OFF-PEAK SEASON)

	Results Within the SFRA	%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
	>= 65	N/A	N/A	N/A	0	0	0
	60 to < 65	N/A	N/A	N/A	0	0	0
	55 to < 60	N/A	N/A	N/A	0	0	0
	50 to < 55	N/A	N/A	N/A	0	0	0
	45 to < 50	N/A	N/A	N/A	1	1	1
	40 to < 45	N/A	N/A	N/A	3	3	2
	35 to < 40	N/A	N/A	N/A	4	4	3
	30 to < 35	N/A	N/A	N/A	4	4	3
	25 to < 30	N/A	N/A	N/A	5	5	3
	20 to < 25	N/A	N/A	N/A	7	6	4
	15 to < 20	N/A	N/A	N/A	14	8	6
	10 to < 15	N/A	N/A	N/A	16	10	8
	5 to < 10	N/A	N/A	N/A	22	13	10
	0 to < 5	N/A	N/A	N/A	15	15	13

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1 TABLE 20 RESULTS FOR 127 POINT LOCATIONS - ALTERNATIVE E (OFF-PEAK SEASON) - ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
Marble Canyon												
1	CLDWEL	Cliff Dwellers Lodge	0	0	0	0	0	0	0	0	0	0
2	GRID01	Grid Location Point 1	0	3	0	0	0	0	3	0	0	0
3	GRID02	Grid Location Point 2	1	13	0	0	0	1	13	0	0	0
4	GRID03	Grid Location Point 3	1	7	0	0	0	1	7	0	0	0
5	GRID04	Grid Location Point 4	0	0	0	0	0	0	0	0	0	0
6	GRID05	Grid Location Point 5	0	0	0	0	0	0	0	0	0	0
7	MARBDM	Marble Canyon Dam Site	0	0	0	0	0	0	0	0	0	0
8	NOCANY	North Canyon	0	0	0	0	0	0	0	0	0	0
9	SOCAN	South Canyon	0	0	0	0	0	0	0	0	0	0
East End												
10	96MILE	96 Mile Camp	26	37	20	5	0	17	34	12	2	0
11	BASCMP	Bass Camp	0	3	0	0	0	0	1	0	0	0
12	BASIN	The Basin	14	7	0	0	0	1	6	0	0	0
13	BRTANG	Bright Angel Point	1	11	0	0	0	1	11	0	0	0
14	CAPROY	Cape Royal	1	11	0	0	0	1	11	0	0	0
15	CEDRIG	Cedar Ridge	25	12	0	0	0	4	11	0	0	0
16	DSRTVW	Desert View	6	6	0	0	0	8	5	0	0	0
17	ELTOVR	El Tovar	34	11	0	0	0	11	10	0	0	0
18	GC008	Pasture Wash (pinyon-juniper)	80	20	0	0	0	31	18	0	0	0
19	GC011	South Rim (ponderosa pine)	13	20	0	0	0	11	20	0	0	0
20	GC015	Rainbow Plateau (ponderosa pine)	0	3	0	0	0	0	4	0	0	0
21	GC031	Eremita Mesa	93	41	27	7	1	78	38	20	5	0
22	GC032	1.5 km SE of Moran Point	4	5	0	0	0	6	4	0	0	0
23	GRID06	Grid Location Point 6	1	3	0	0	0	0	4	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
24	GRID07	Grid Location Point 7	0	2	0	0	0	0	4	0	0	0
25	GRID10	Grid Location Point 10	44	19	0	0	0	0	14	0	0	0
26	GRID11	Grid Location Point 11	23	12	0	0	0	16	11	0	0	0
27	GRID12	Grid Location Point 12	1	11	0	0	0	1	12	0	0	0
28	GRID13	Grid Location Point 13	1	8	0	0	0	1	8	0	0	0
29	GRID14	Grid Location Point 14	1	7	0	0	0	1	7	0	0	0
30	GRID15	Grid Location Point 15	1	14	0	0	0	1	14	0	0	0
31	GRID16	Grid Location Point 16	17	12	0	0	0	27	13	0	0	0
32	GRID17	Grid Location Point 17	1	1	0	0	0	1	1	0	0	0
33	GRID18	Grid Location Point 18	34	11	0	0	0	5	9	0	0	0
34	GRID19	Grid Location Point 19	0	8	0	0	0	0	10	0	0	0
35	HBASIN	Hermit Basin	71	23	1	0	0	32	18	0	0	0
36	LIPAN	Lipan Point	8	7	0	0	0	12	5	0	0	0
37	LITCOL	Little Colorado	0	0	0	0	0	0	0	0	0	0
38	LTCORV	Little Colorado River	0	7	0	0	0	0	7	0	0	0
39	NANMES	Nankoweap Mesa	1	14	0	0	0	2	15	0	0	0
40	NANRIV	Nankoweap at River	0	11	0	0	0	0	12	0	0	0
41	NAVA1	Navajo 1	1	5	0	0	0	1	5	0	0	0
42	NAVA2	Navajo 2	0	0	0	0	0	0	0	0	0	0
43	PHANTM	Phantom Ranch	1	7	0	0	0	1	6	0	0	0
44	PTIMPR	Point Imperial	1	6	0	0	0	1	6	0	0	0
45	PTSUBL	Point Sublime	89	29	7	0	0	63	25	0	0	0
46	RANCH	The Ranch	85	42	34	10	0	64	39	29	7	0
47	TEMBUT	Temple Butte	1	6	0	0	0	1	6	0	0	0
48	TENMED	Ten X Meadow	21	18	0	0	0	15	20	0	0	0
49	TOWER	Tower of Ra	61	46	16	7	3	49	44	15	7	2
50	TUSAYN	Tusayan	0	3	0	0	0	0	2	0	0	0
51	ZUNALF	Zuni Alpha	0	2	0	0	0	0	3	0	0	0
52	ZUNCHR	Zuni Charlie	1	1	0	0	0	1	1	0	0	0
Central												
53	COYCAN	Coyote Canyon	0	16	0	0	0	0	16	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
54	DOME	The Dome	1	12	0	0	0	1	13	0	0	0
55	GC009	Tuweep (warm desert scrub)	25	16	0	0	0	0	17	0	0	0
56	GC010	Tuweep (cold desert scrub)	8	9	0	0	0	0	10	0	0	0
57	GC016	Hancock Knolls (pinyon-juniper)	2	9	0	0	0	2	10	0	0	0
58	GC017	1 km W of Kanab Point (cold desert scrub)	2	7	0	0	0	2	7	0	0	0
59	GC033	Fossil Canyon	2	10	0	0	0	1	10	0	0	0
60	GRID08	Grid Location Point 8	2	10	0	0	0	1	11	0	0	0
61	GRID09	Grid Location Point 9	1	4	0	0	0	1	3	0	0	0
62	GRID20	Grid Location Point 20	0	4	0	0	0	0	4	0	0	0
63	GRID21	Grid Location Point 21	2	14	0	0	0	2	14	0	0	0
64	GRID22	Grid Location Point 22	1	9	0	0	0	1	9	0	0	0
65	GRID23	Grid Location Point 23	2	9	0	0	0	2	9	0	0	0
66	GRID24	Grid Location Point 24	2	5	0	0	0	2	6	0	0	0
67	GRID25	Grid Location Point 25	2	7	0	0	0	2	7	0	0	0
68	GRID26	Grid Location Point 26	2	10	0	0	0	1	10	0	0	0
69	GRID35	Grid Location Point 35	0	1	0	0	0	0	1	0	0	0
70	GRID36	Grid Location Point 36	0	0	0	0	0	0	0	0	0	0
71	HAVAPT	Havasupai Point	0	0	0	0	0	0	0	0	0	0
72	HAVCAN	Havataagvitch Canyon	1	8	0	0	0	1	8	0	0	0
73	KANAPT	Kanab Point	1	7	0	0	0	1	8	0	0	0
74	MOHAWK	Mohawk Canyon	0	8	0	0	0	0	8	0	0	0
75	MOHCAN	Mohawk Canyon	0	6	0	0	0	0	6	0	0	0
76	MTSINY	Mt. Sinyala	2	0	0	0	0	1	0	0	0	0
77	NATCAN	National Canyon	1	7	0	0	0	1	8	0	0	0
78	PROCAN	Prospect Canyon	0	9	0	0	0	0	12	0	0	0
79	PRSPCT	Prospect Canyon	19	19	0	0	0	20	19	0	0	0
80	SOSUPC	South Supai Canyon	2	21	1	0	0	2	20	1	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
81	STONCK	Stone Creek	0	0	0	0	0	0	0	0	0	0
82	SUPVIL	Supai Village	1	26	0	0	0	1	24	0	0	0
83	SURPVA	Surprise Valley	1	0	0	0	0	1	0	0	0	0
84	TOROWP	Toroweap Overlook	0	15	0	0	0	0	16	0	0	0
85	TWPRS	Tuweep Ranger Station	3	6	0	0	0	1	7	0	0	0
86	UPDRCK	Upper Deer Creek	1	0	0	0	0	1	0	0	0	0
West End												
87	ADMIN	NPS Administration site	30	20	0	0	0	2	21	0	0	0
88	ANDRUS	Andrus Canyon	59	39	25	4	0	65	38	39	1	0
89	BATCAV	Bat Cave	96	48	82	32	5	88	46	74	24	4
90	BRNTSP	Burnt Springs Canyon	76	47	80	28	3	67	44	71	17	1
91	CASTLE	Castle Peak	56	24	0	0	0	58	24	0	0	0
92	DIACRK	Diamond Creek	1	7	0	0	0	0	1	0	0	0
93	GC018	Separation Canyon (warm desert scrub)	1	9	0	0	0	1	9	0	0	0
94	GCWEST	Grand Canyon West	95	36	28	0	0	83	33	18	0	0
95	GRAGOR	Granite Gorge	63	35	11	2	0	50	33	10	1	0
96	GRID27	Grid Location Point 27	12	19	0	0	0	12	20	0	0	0
97	GRID28	Grid Location Point 28	5	16	0	0	0	3	17	0	0	0
98	GRID29	Grid Location Point 29	11	13	0	0	0	6	13	0	0	0
99	GRID30	Grid Location Point 30	53	31	3	1	0	16	25	2	0	0
100	GRID31	Grid Location Point 31	2	12	0	0	0	2	13	0	0	0
101	GRID32	Grid Location Point 32	4	21	1	0	0	5	22	1	0	0
102	GRID33	Grid Location Point 33	89	43	28	11	1	61	38	24	5	0
103	GRID34	Grid Location Point 34	1	4	0	0	0	0	2	0	0	0
104	GRNTPK	Granite Peak	2	15	0	0	0	2	16	0	0	0
105	GUSPLT	Gus Plateau	35	22	1	0	0	26	23	1	0	0
106	HFCAN	Horse Flat Canyon	4	13	0	0	0	2	12	0	0	0
107	KELLPT	Kelly Point	4	10	0	0	0	1	10	0	0	0
108	MERIWH	Meriwhitca	2	8	0	0	0	1	8	0	0	0
109	MTDELL	Mt. Dellenbaugh	1	18	0	0	0	1	19	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
110	NONAME	Jackson Canyon	26	26	2	0	0	8	25	2	0	0
111	PARWAS	Parashant Wash	14	27	3	0	0	18	25	0	0	0
112	PMPKIN	Pumpkin Springs	0	7	0	0	0	0	8	0	0	0
113	PSCNNO	Peach Spring Canyon North	2	8	0	0	0	1	6	0	0	0
114	PSCNSO	Peach Spring Canyon South	NA	17	0	0	0	NA	10	0	0	0
115	QMPNT	Quartermaster Point	75	45	54	19	1	67	44	46	18	0
116	SADMTN	Saddle Mountain	1	6	0	0	0	1	7	0	0	0
117	SANUP	Sanup	75	27	3	0	0	28	21	0	0	0
118	SCCORV	Separation Canyon, 1km N of Colorado River	1	8	0	0	0	1	8	0	0	0
119	SCMCIG	Spencer/Meriwhitca Canyons	1	6	0	0	0	0	5	0	0	0
120	SEPARC	Separation Canyon at Colorado River	0	7	0	0	0	0	7	0	0	0
121	SHWZFC	Shivwitz Fire Camp	1	19	0	0	0	2	20	0	0	0
122	SPENCA	Spencer Canyon	2	9	0	0	0	1	8	0	0	0
123	SUIPNT	Suicide Point	3	20	1	0	0	4	21	1	0	0
124	THRSPR	Three Springs	2	8	0	0	0	2	8	0	0	0
125	TWINPT	Twin Point	21	22	1	0	0	8	22	1	0	0
126	WESEND	West End	61	40	47	10	0	36	36	31	1	0
127	WHTRAP	Whitmore Rapids	24	30	6	0	0	25	28	2	0	0

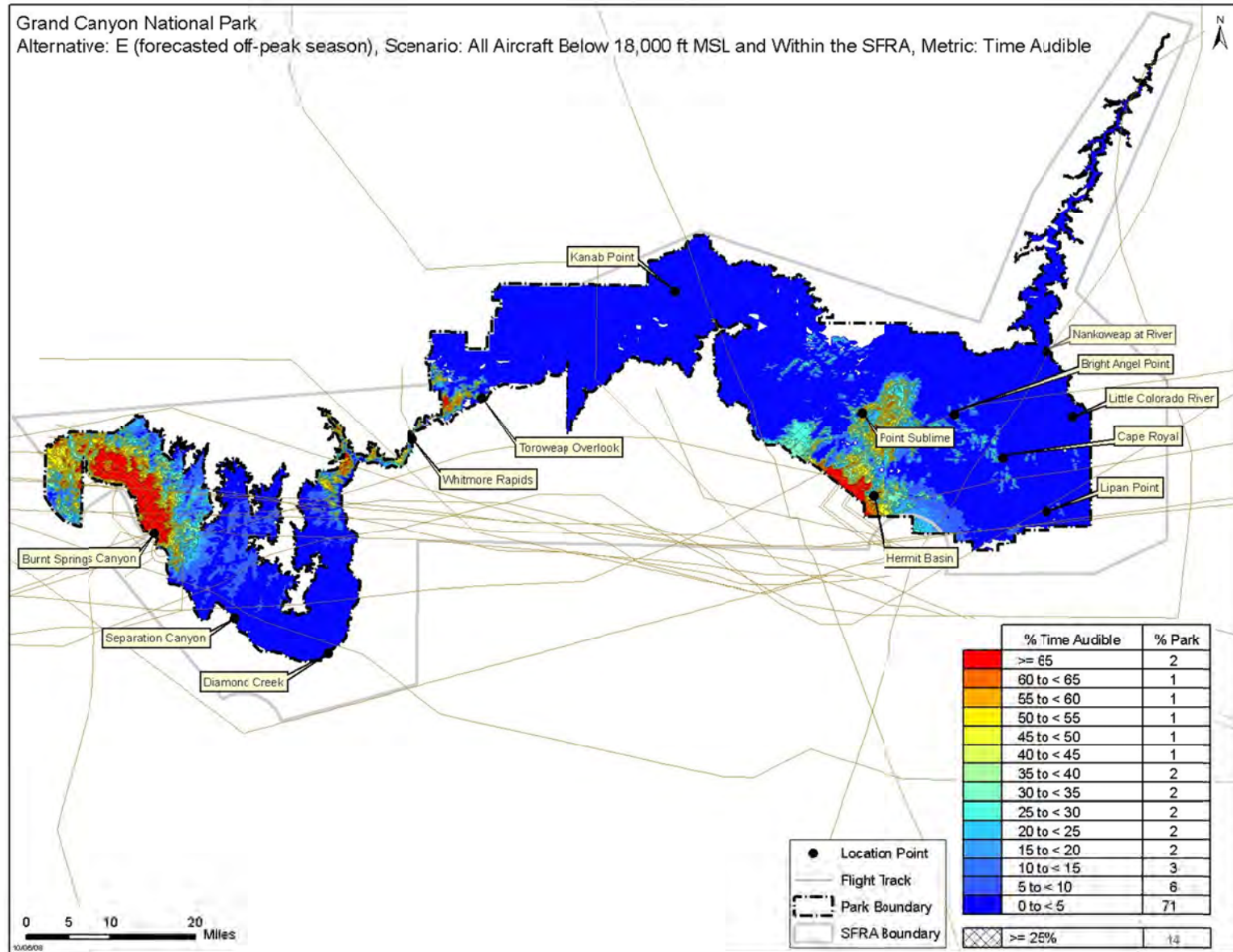


FIGURE 33 ALTERNATIVE E (TEN-YEAR FORECASTED OFF-PEAK SEASON) – %TAUD CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

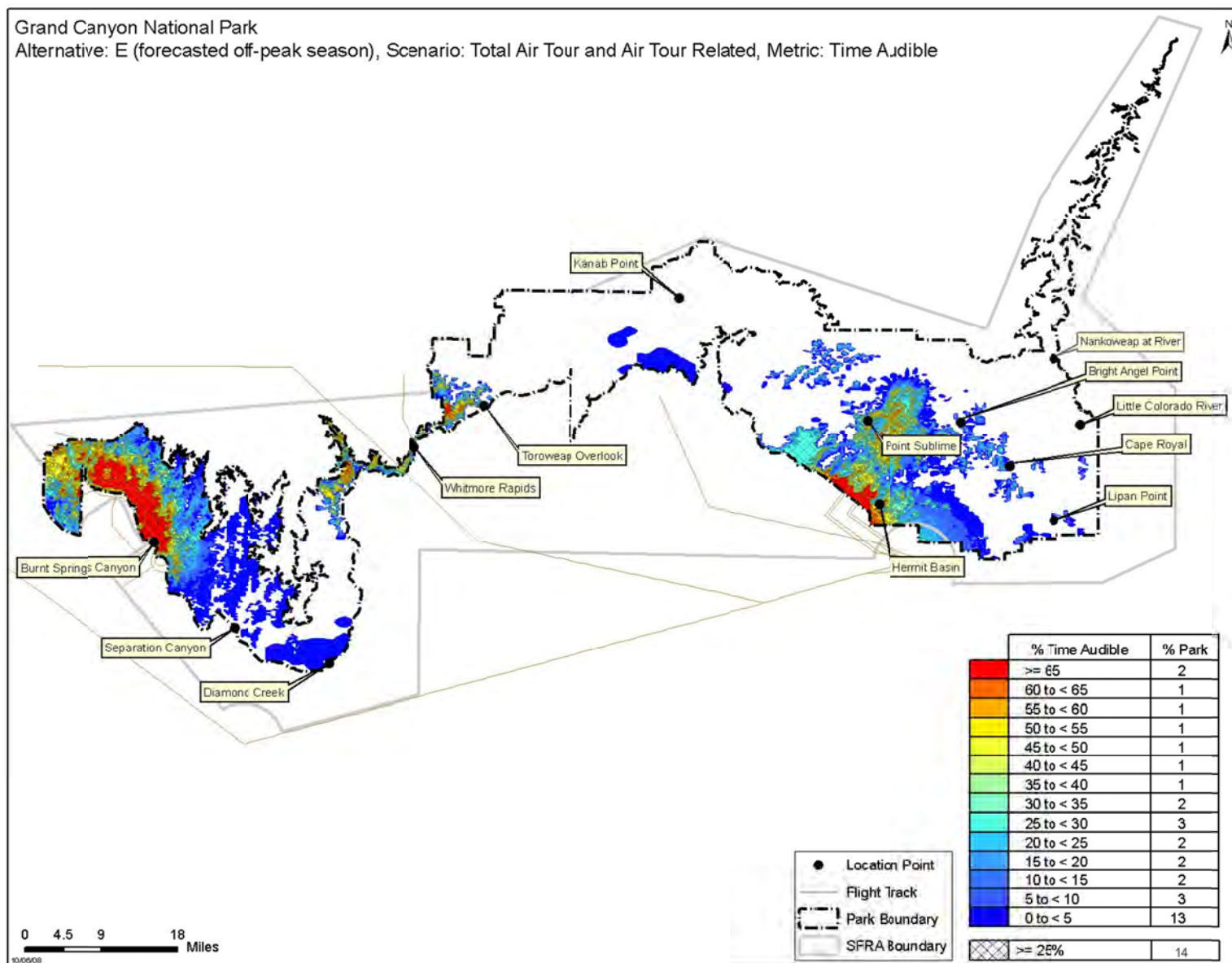


FIGURE 34 ALTERNATIVE E (TEN-YEAR FORECASTED OFF-PEAK SEASON) – %TAUD CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

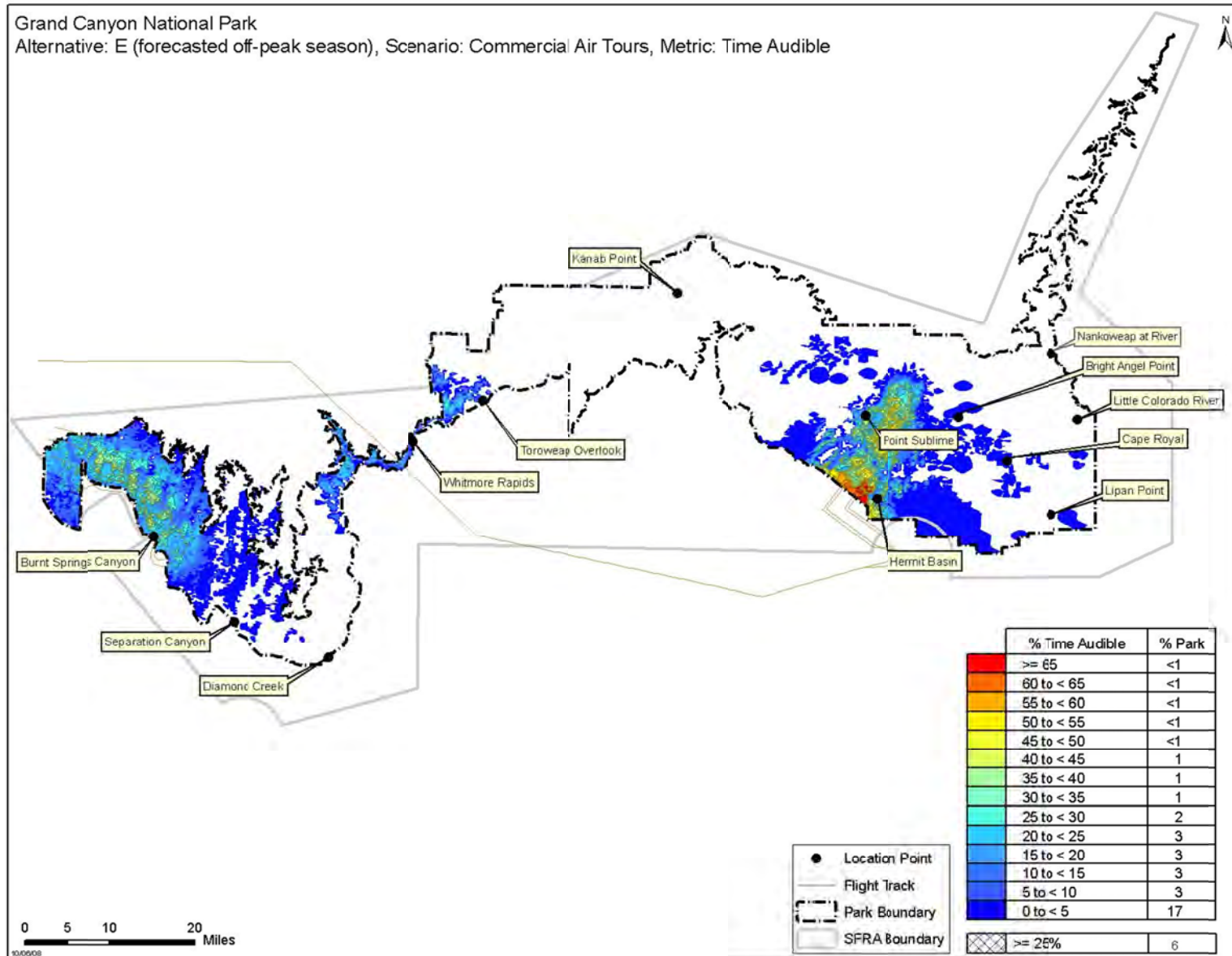


FIGURE 35 ALTERNATIVE E (TEN-YEAR FORECASTED OFF-PEAK SEASON) – %TAUD CONTOURS – COMMERCIAL AIR-TOURS

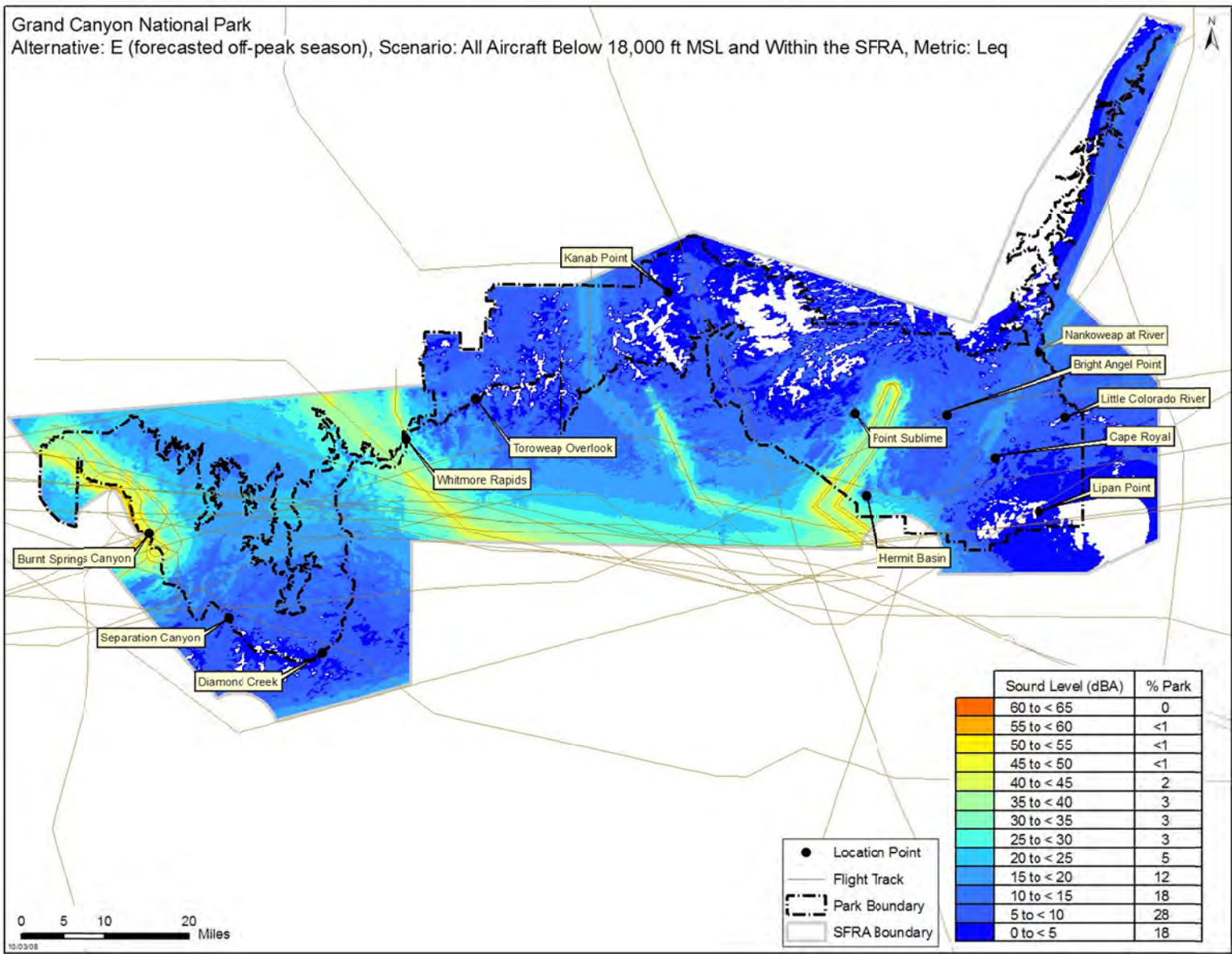


FIGURE 36 ALTERNATIVE E (TEN-YEAR FORECASTED OFF-PEAK SEASON) – L_{Aeq12} CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

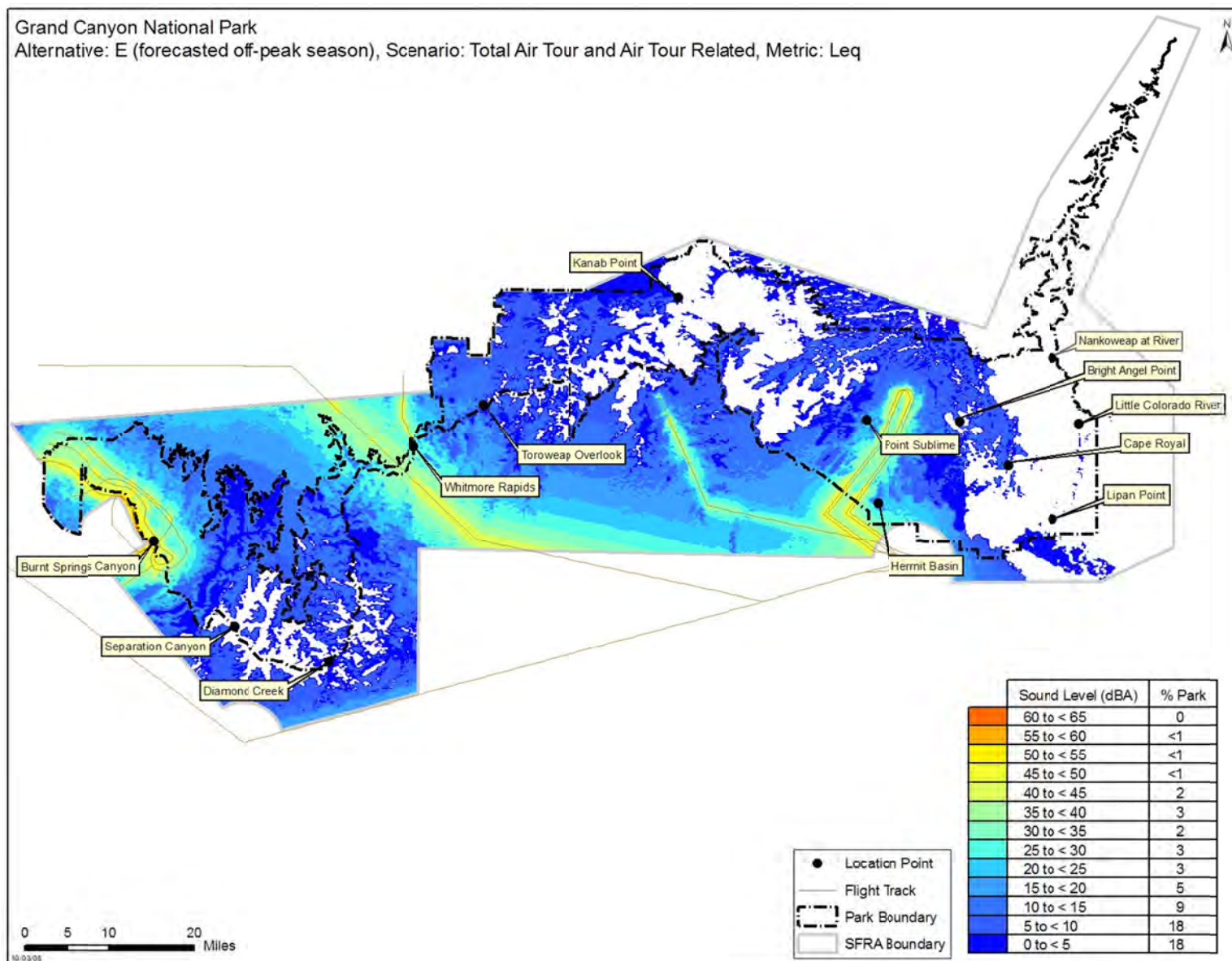


FIGURE 37 ALTERNATIVE E (TEN-YEAR FORECASTED OFF-PEAK SEASON) – L_{AEQ12} CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

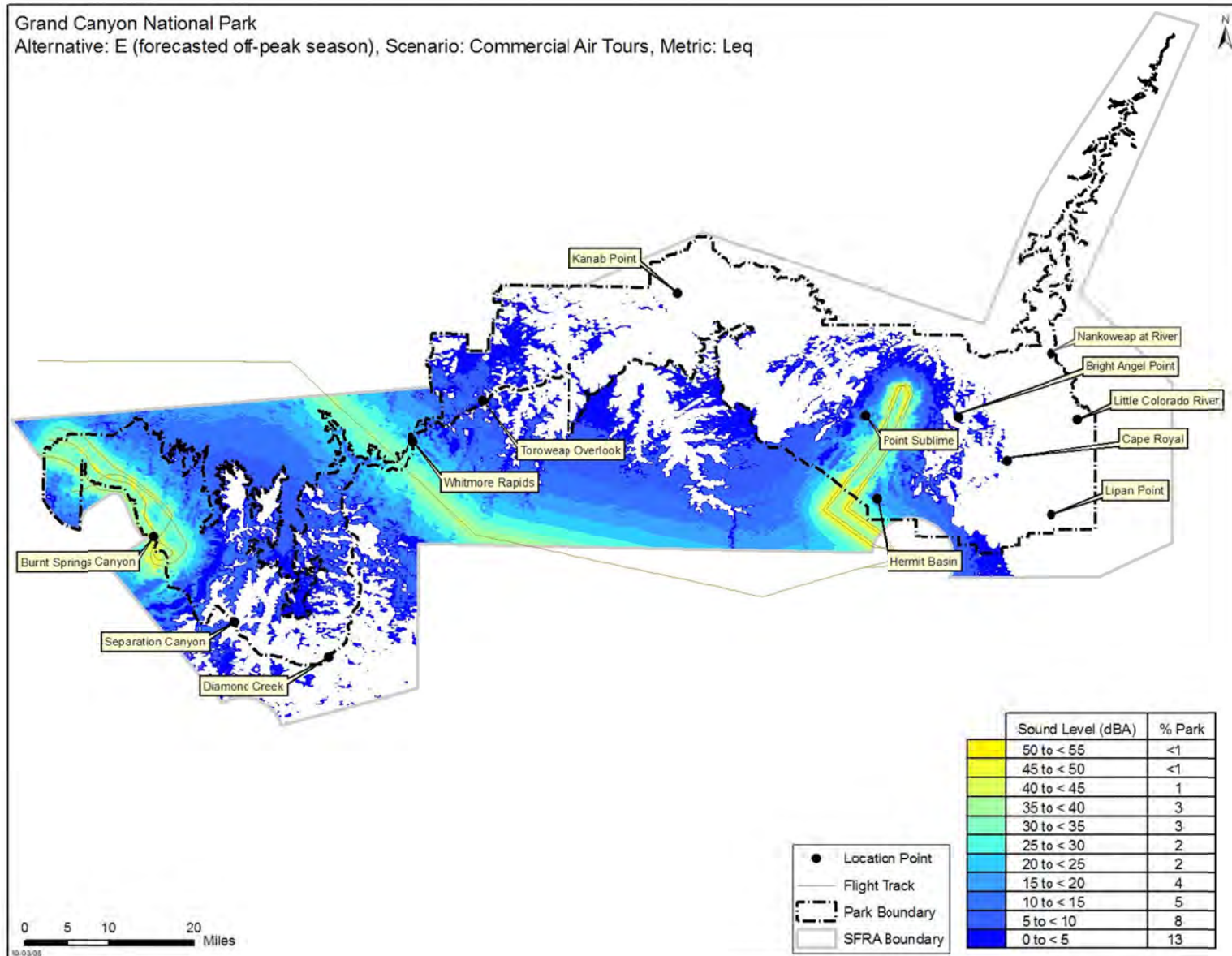


FIGURE 38 ALTERNATIVE E (TEN-YEAR FORECASTED OFF-PEAK SEASON) – L_{AEQ12} CONTOURS – COMMERCIAL AIR-TOURS

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TABLE 21 DETAILED CONTOUR ANALYSIS RESULTS WITHIN GCNP- ALTERNATIVE E (OFF-PEAK SEASON) FOR THE TEN-YEAR FORECAST

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Developed		% Of Management Zone					
	>= 65	0	0	0	0	0	0
	60 to < 65	0	0	0	0	0	0
	55 to < 60	0	0	0	0	0	0
	50 to < 55	0	0	0	0	0	0
	45 to < 50	0	0	0	0	0	0
	40 to < 45	1	1	0	0	0	0
	35 to < 40	2	2	0	0	0	0
	30 to < 35	7	5	0	1	1	0
	25 to < 30	6	8	1	4	4	0
	20 to < 25	6	6	1	27	24	2
	15 to < 20	9	9	2	21	20	8
	10 to < 15	16	16	2	15	10	33
	5 to < 10	13	14	2	13	12	13
	0 to < 5	35	13	71	18	12	11
Non-Wilderness		% Of Management Zone					
	>= 65	0	0	0	0	0	0
	60 to < 65	1	1	0	0	0	0
	55 to < 60	1	1	0	0	0	0
	50 to < 55	0	0	0	0	0	0
	45 to < 50	1	1	1	0	0	0
	40 to < 45	1	2	1	0	0	0
	35 to < 40	1	1	0	0	0	0
	30 to < 35	4	3	0	2	2	1
	25 to < 30	4	4	0	8	8	2
	20 to < 25	4	4	1	14	13	3
	15 to < 20	6	5	1	9	8	11
	10 to < 15	8	8	2	14	7	11
	5 to < 10	11	10	2	26	25	11
	0 to < 5	53	14	49	18	13	16

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Proposed Wilderness		% Of Management Zone					
	>= 65	2	2	0	0	0	0
	60 to < 65	1	1	0	0	0	0
	55 to < 60	1	1	0	0	0	0
	50 to < 55	1	1	0	0	0	0
	45 to < 50	1	2	0	1	1	0
	40 to < 45	1	1	1	2	2	1
	35 to < 40	2	1	1	3	3	3
	30 to < 35	2	2	1	3	2	3
	25 to < 30	2	2	2	2	2	2
	20 to < 25	2	2	3	5	3	2
	15 to < 20	2	2	3	12	5	3
	10 to < 15	2	2	3	18	9	5
	5 to < 10	5	3	3	28	18	8
	0 to < 5	72	13	15	18	18	13
Entire Park		% Of GCNP					
	>= 65	2	2	0	0	0	0
	60 to < 65	1	1	0	0	0	0
	55 to < 60	1	1	0	0	0	0
	50 to < 55	1	1	0	0	0	0
	45 to < 50	1	1	0	0	0	0
	40 to < 45	1	1	1	2	2	1
	35 to < 40	2	1	1	3	3	3
	30 to < 35	2	2	1	3	2	3
	25 to < 30	2	2	2	3	3	2
	20 to < 25	2	2	3	5	3	2
	15 to < 20	2	2	3	12	5	4
	10 to < 15	3	2	3	18	9	5
	5 to < 10	6	3	3	28	18	8
	0 to < 5	71	13	16	18	18	13

1

TABLE 22 DETAILED CONTOUR ANALYSIS RESULTS WITHIN THE SFRA - ALTERNATIVE E (OFF-PEAK SEASON) FOR THE TEN-YEAR FORECAST

Results Within the SFRA		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
	>= 65	N/A	N/A	N/A	0	0	0
	60 to < 65	N/A	N/A	N/A	0	0	0
	55 to < 60	N/A	N/A	N/A	0	0	0
	50 to < 55	N/A	N/A	N/A	0	0	0
	45 to < 50	N/A	N/A	N/A	1	1	0
	40 to < 45	N/A	N/A	N/A	2	2	1
	35 to < 40	N/A	N/A	N/A	4	4	2
	30 to < 35	N/A	N/A	N/A	4	4	3
	25 to < 30	N/A	N/A	N/A	5	5	3
	20 to < 25	N/A	N/A	N/A	9	6	4
	15 to < 20	N/A	N/A	N/A	14	9	6
	10 to < 15	N/A	N/A	N/A	15	10	8
	5 to < 10	N/A	N/A	N/A	22	14	10
	0 to < 5	N/A	N/A	N/A	15	13	11

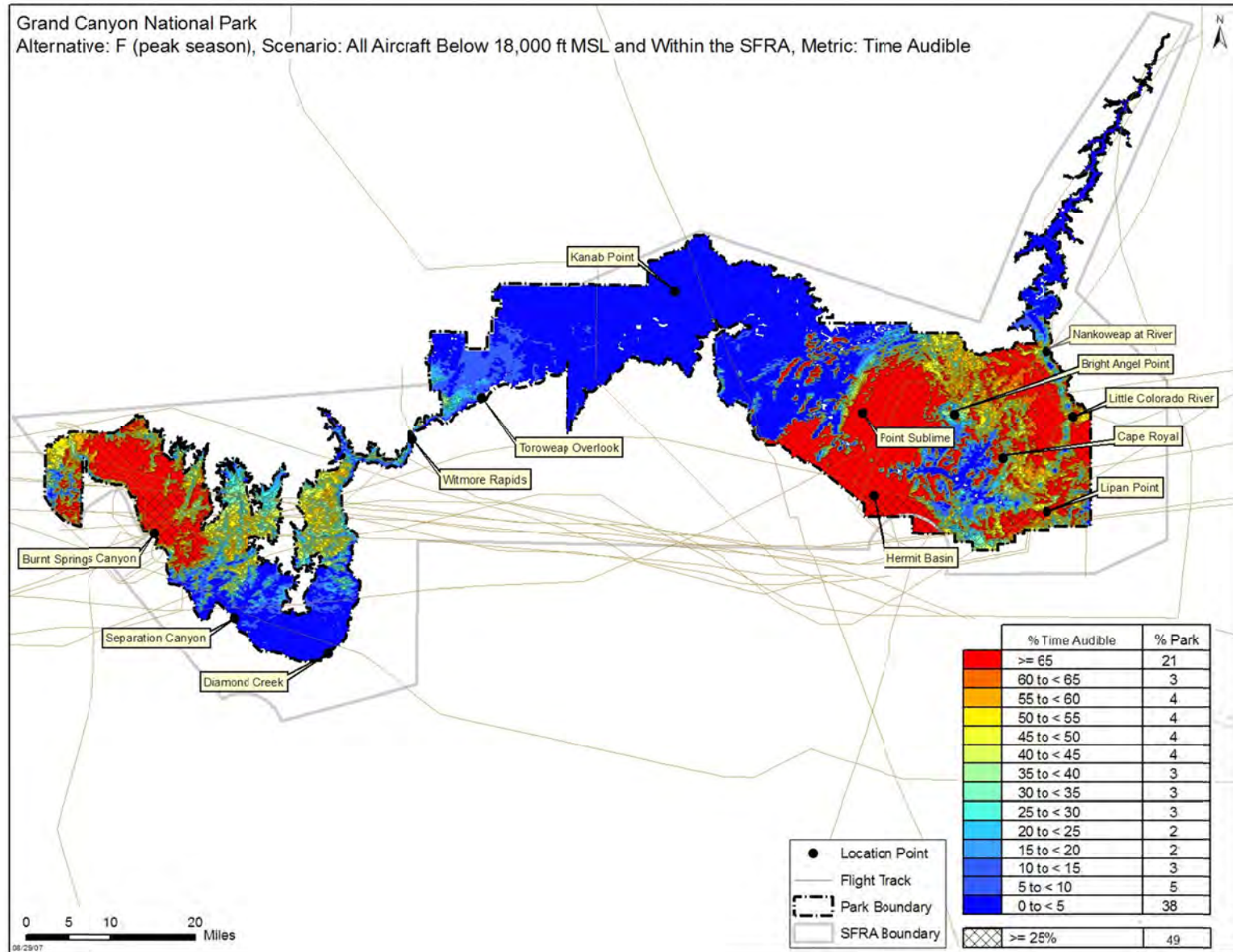


FIGURE 39 ALTERNATIVE F (PEAK SEASON) – %TAUD CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

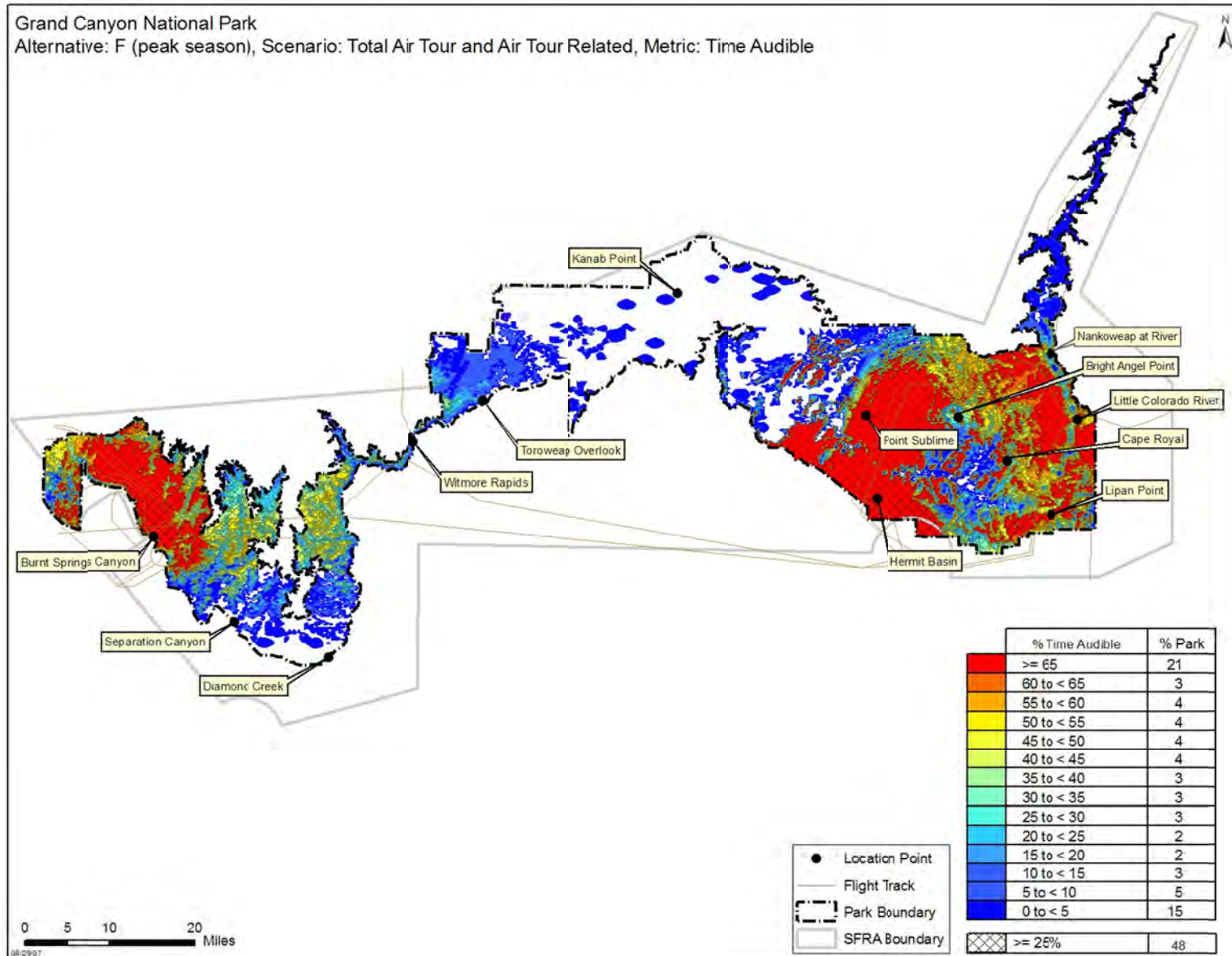


FIGURE 40 ALTERNATIVE F (PEAK SEASON) – %TAUD CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

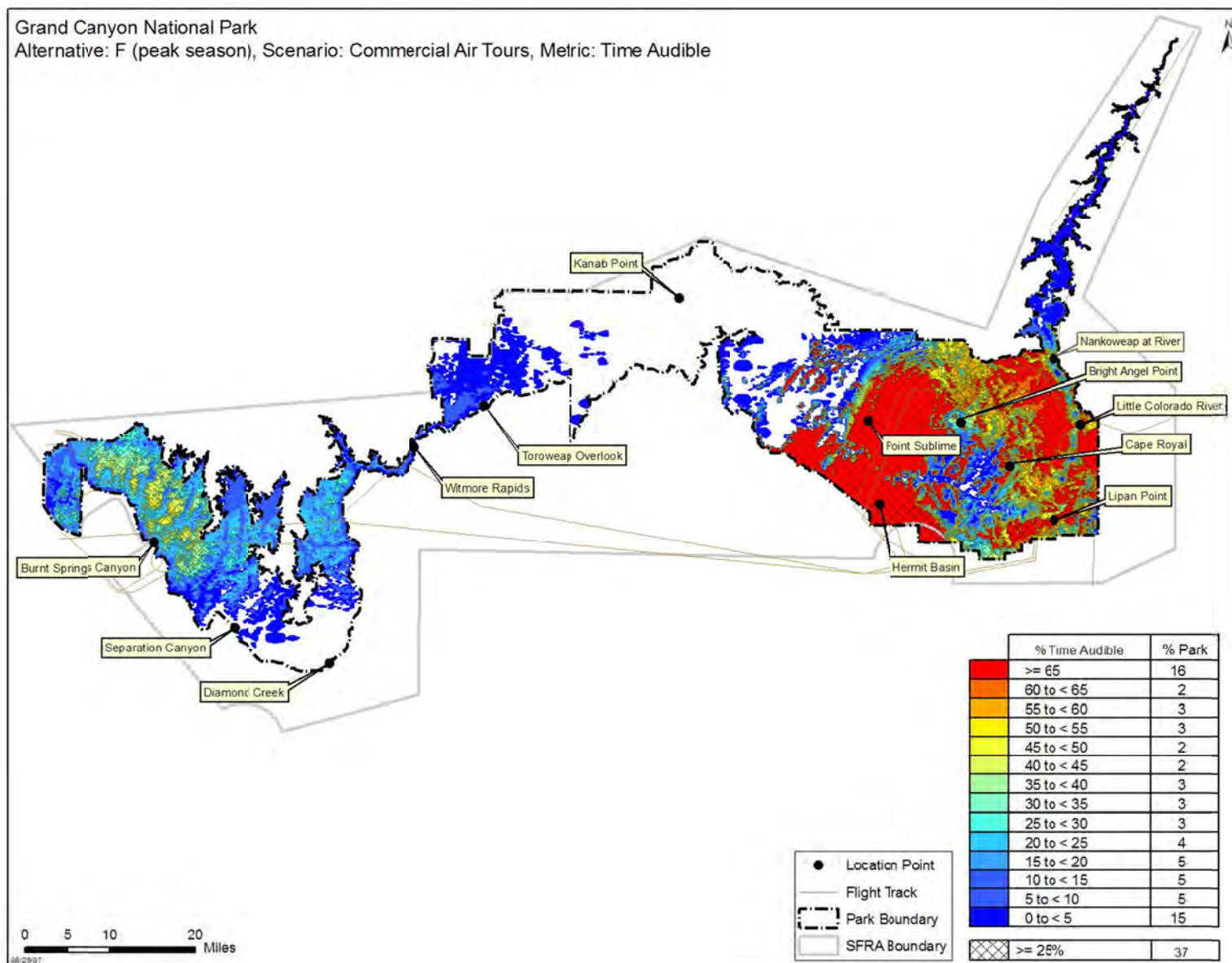


FIGURE 41 ALTERNATIVE F (PEAK SEASON) – %TAUD CONTOURS – COMMERCIAL AIR-TOURS

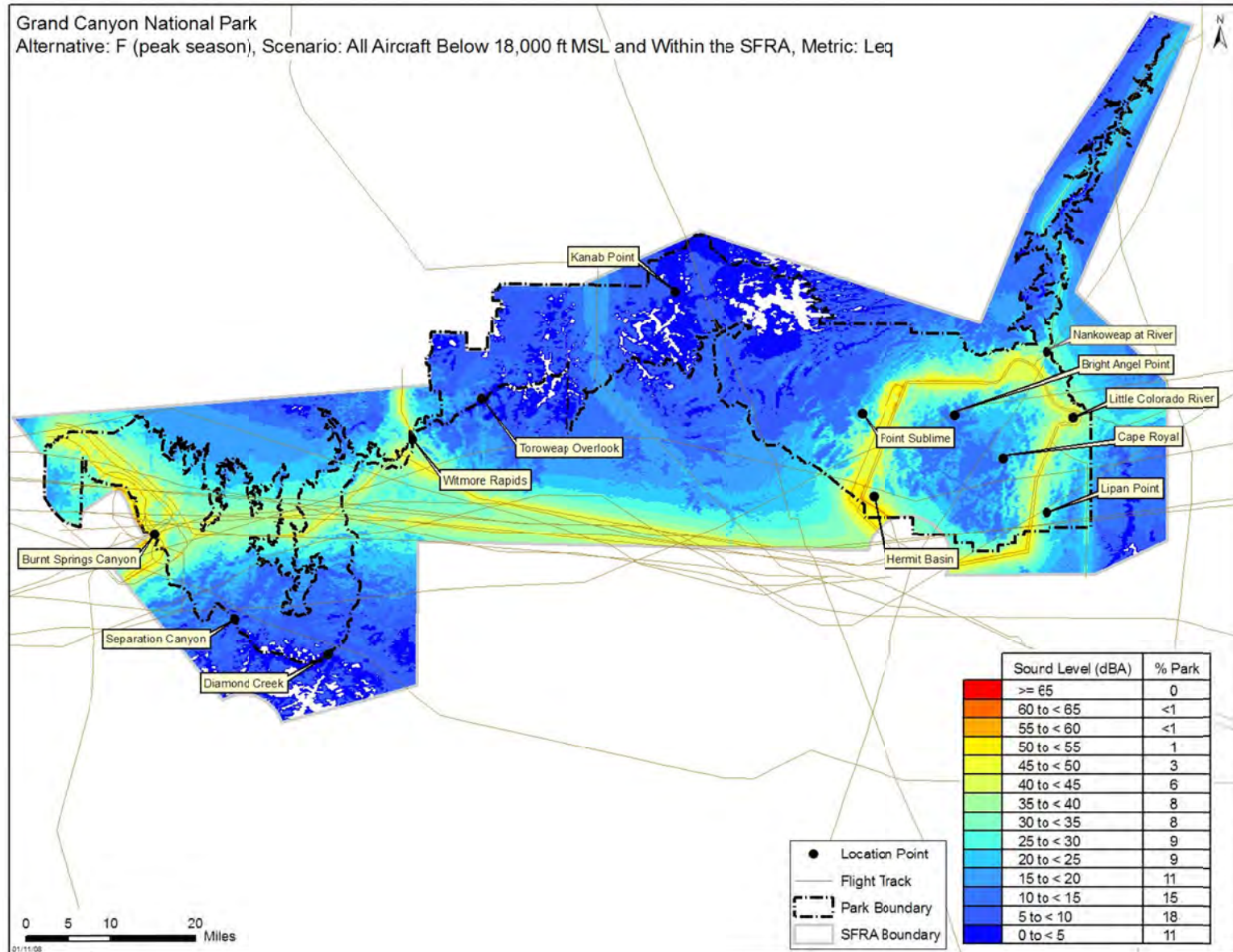


FIGURE 42 ALTERNATIVE F (PEAK SEASON) – L_{AEQ12} CONTOURS – ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA

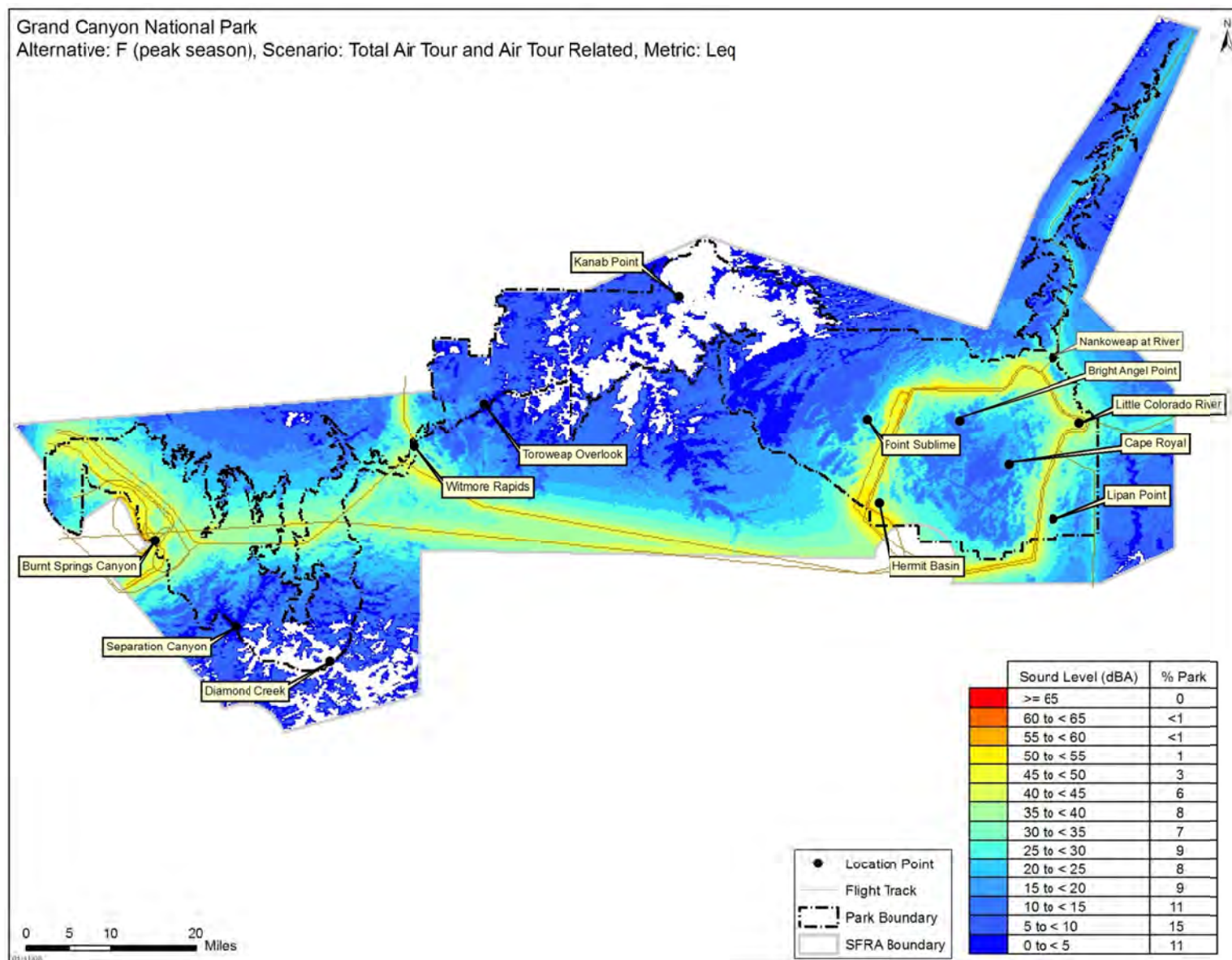


FIGURE 43 ALTERNATIVE F (PEAK SEASON) – L_{AEQ12} CONTOURS – AIR-TOUR AND AIR-TOUR RELATED

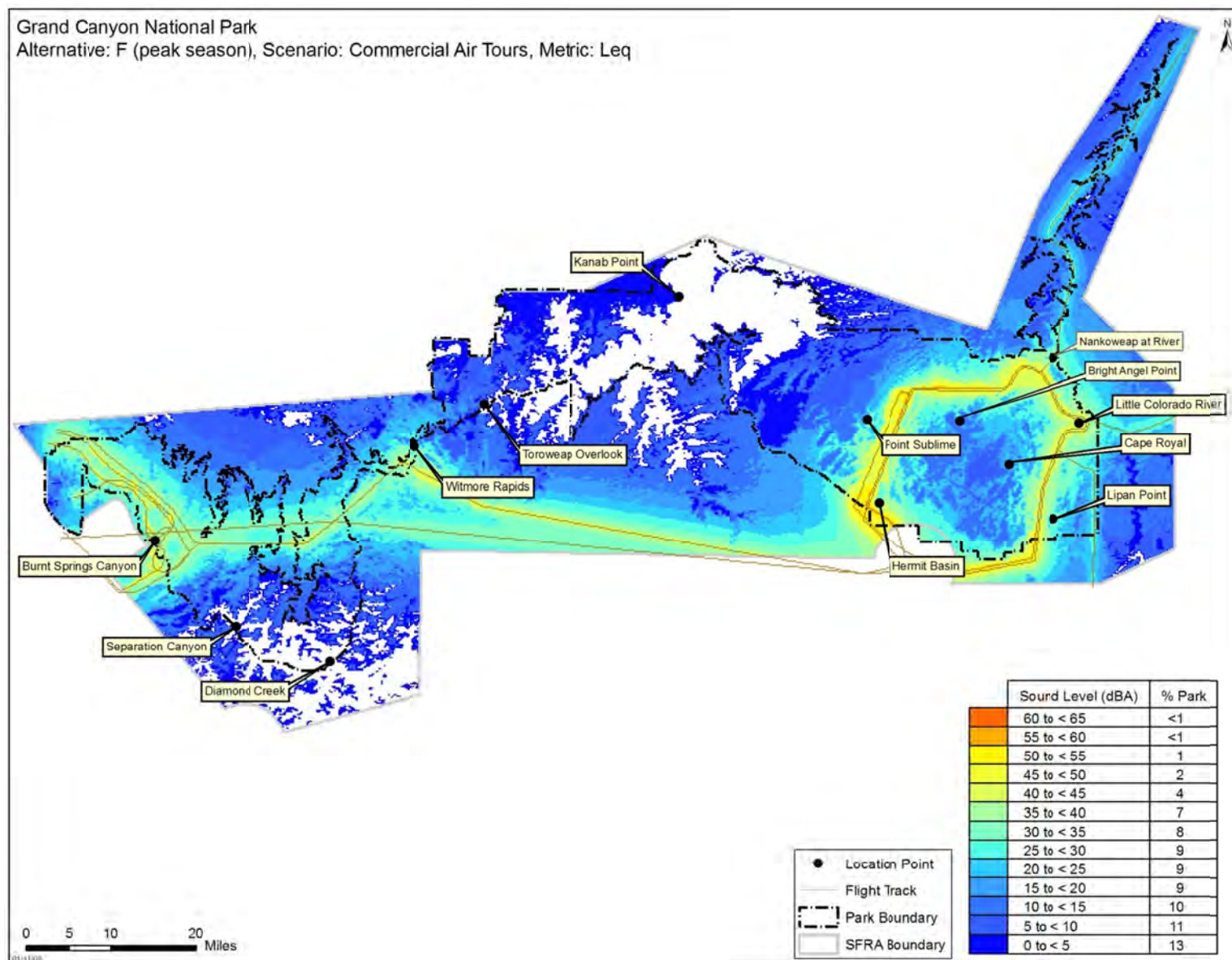


FIGURE 44 ALTERNATIVE F (PEAK SEASON) – L_{AEQ12} CONTOURS – COMMERCIAL AIR-TOURS

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TABLE 23 DETAILED CONTOUR ANALYSIS RESULTS WITHIN GCNP- ALTERNATIVE F (PEAK SEASON)

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Developed		% Of Management Zone					
	>= 65	51	50	49	0	0	0
	60 to < 65	7	7	8	0	0	0
	55 to < 60	5	5	5	0	0	0
	50 to < 55	4	4	4	2	2	2
	45 to < 50	3	4	3	2	2	2
	40 to < 45	6	6	6	2	2	2
	35 to < 40	4	4	4	5	5	5
	30 to < 35	5	4	5	15	15	15
	25 to < 30	4	4	4	43	43	41
	20 to < 25	3	4	4	24	24	26
	15 to < 20	1	1	1	6	6	6
	10 to < 15	1	1	1	2	2	2
	5 to < 10	3	2	1	0	0	1
	0 to < 5	2	3	5	0	0	0
Non-Wilderness		% Of Management Zone					
	>= 65	36	35	35	0	0	0
	60 to < 65	6	6	6	0	0	0
	55 to < 60	7	7	7	1	1	1
	50 to < 55	6	6	6	3	3	3
	45 to < 50	5	5	5	4	4	4
	40 to < 45	5	5	5	4	4	4
	35 to < 40	5	5	5	8	8	8
	30 to < 35	6	6	6	13	13	13
	25 to < 30	4	4	4	24	24	24
	20 to < 25	3	3	3	16	16	16
	15 to < 20	2	2	2	12	11	11
	10 to < 15	2	2	2	10	8	8
	5 to < 10	4	3	2	3	5	4
	0 to < 5	10	6	7	1	1	3

Results Within GCNP		%TAUD			L _{Aeq12} (dBA)		
		All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours	All Aircraft Below 18,000 ft MSL and Within the SFRA	Air-tour and Air-tour Related	Commercial Air-tours
Proposed Wilderness		% Of Management Zone					
	>= 65	20	20	15	0	0	0
	60 to < 65	3	3	2	0	0	0
	55 to < 60	4	3	2	0	0	0
	50 to < 55	4	4	2	1	1	1
	45 to < 50	4	4	2	3	3	2
	40 to < 45	4	4	2	6	6	4
	35 to < 40	3	3	3	8	8	7
	30 to < 35	3	3	2	7	7	8
	25 to < 30	2	3	3	8	8	8
	20 to < 25	2	2	4	8	8	9
	15 to < 20	2	2	6	11	9	9
	10 to < 15	3	3	5	15	11	10
	5 to < 10	5	5	5	19	15	12
	0 to < 5	39	16	15	11	12	14
Entire Park		% Of GCNP					
	>= 65	21	21	16	0	0	0
	60 to < 65	3	3	2	0	0	0
	55 to < 60	4	4	3	0	0	0
	50 to < 55	4	4	3	1	1	1
	45 to < 50	4	4	2	3	3	2
	40 to < 45	4	4	2	6	6	4
	35 to < 40	3	3	3	8	8	7
	30 to < 35	3	3	3	8	7	8
	25 to < 30	3	3	3	9	9	9
	20 to < 25	2	3	4	9	8	9
	15 to < 20	2	2	5	11	9	9
	10 to < 15	3	3	5	15	11	10
	5 to < 10	5	5	5	18	15	11
	0 to < 5	38	15	15	11	11	13

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TABLE 24 DETAILED CONTOUR ANALYSIS RESULTS WITHIN THE SFRA - ALTERNATIVE F (PEAK SEASON)

Results Within the SFRA		All Aircraft Below 18,000 ft MSL and Within the SFRA	%TAUD		All Aircraft Below 18,000 ft MSL and Within the SFRA	L _{Aeq12} (dBA)	
			Air-tour and Air- tour Related	Commercial Air- tours		Air-tour and Air- tour Related	Commercial Air- tours
	>= 65	N/A	N/A	N/A	0	0	0
	60 to < 65	N/A	N/A	N/A	0	0	0
	55 to < 60	N/A	N/A	N/A	0	0	0
	50 to < 55	N/A	N/A	N/A	1	1	1
	45 to < 50	N/A	N/A	N/A	2	2	1
	40 to < 45	N/A	N/A	N/A	5	5	3
	35 to < 40	N/A	N/A	N/A	7	7	5
	30 to < 35	N/A	N/A	N/A	7	7	8
	25 to < 30	N/A	N/A	N/A	8	8	8
	20 to < 25	N/A	N/A	N/A	11	10	10
	15 to < 20	N/A	N/A	N/A	16	12	12
	10 to < 15	N/A	N/A	N/A	17	15	14
	5 to < 10	N/A	N/A	N/A	16	14	14
	0 to < 5	N/A	N/A	N/A	9	10	11

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1 **TABLE 25 RESULTS FOR 127 POINT LOCATIONS - ALTERNATIVE F (PEAK SEASON) - ALL AIRCRAFT BELOW 18,000 FT MSL AND WITHIN THE SFRA**

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
Marble Canyon												
1	CLDWEL	Cliff Dwellers Lodge	1	6	0	0	0	1	6	0	0	0
2	GRID01	Grid Location Point 1	0	15	0	0	0	0	16	0	0	0
3	GRID02	Grid Location Point 2	2	16	0	0	0	2	17	0	0	0
4	GRID03	Grid Location Point 3	3	14	0	0	0	3	15	0	0	0
5	GRID04	Grid Location Point 4	0	0	0	0	0	0	0	0	0	0
6	GRID05	Grid Location Point 5	2	8	0	0	0	2	8	0	0	0
7	MARBDM	Marble Canyon Dam Site	0	3	0	0	0	0	2	0	0	0
8	NOCANY	North Canyon	3	24	1	0	0	3	24	1	0	0
9	SOCAN	South Canyon	2	21	1	0	0	2	21	1	0	0
East End												
10	96MILE	96 Mile Camp	72	45	89	27	0	47	41	69	11	0
11	BASCMP	Bass Camp	0	7	0	0	0	0	2	0	0	0
12	BASIN	The Basin	73	48	31	13	4	40	45	22	7	3
13	BRTANG	Bright Angel Point	47	24	0	0	0	12	18	0	0	0
14	CAPROY	Cape Royal	59	25	1	0	0	17	19	0	0	0
15	CEDRIG	Cedar Ridge	81	19	0	0	0	5	13	0	0	0
16	DSRTVW	Desert View	77	29	5	0	0	43	21	0	0	0
17	ELTOVR	El Tovar	95	19	0	0	0	12	13	0	0	0
18	GC008	Pasture Wash (pinyon-juniper)	99	22	0	0	0	20	17	0	0	0
19	GC011	South Rim (ponderosa pine)	52	26	0	0	0	6	21	0	0	0
20	GC015	Rainbow Plateau (ponderosa pine)	0	7	0	0	0	0	5	0	0	0
21	GC031	Eremita Mesa	100	49	100	51	5	98	46	100	38	0
22	GC032	1.5 km SE of Moran Point	65	41	36	9	0	43	37	21	4	0
23	GRID06	Grid Location Point 6	52	19	0	0	0	31	13	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
24	GRID07	Grid Location Point 7	1	8	0	0	0	0	6	0	0	0
25	GRID10	Grid Location Point 10	92	25	0	0	0	0	19	0	0	0
26	GRID11	Grid Location Point 11	60	18	0	0	0	10	12	0	0	0
27	GRID12	Grid Location Point 12	1	13	0	0	0	1	12	0	0	0
28	GRID13	Grid Location Point 13	1	12	0	0	0	1	9	0	0	0
29	GRID14	Grid Location Point 14	70	34	17	0	0	53	28	4	0	0
30	GRID15	Grid Location Point 15	65	28	5	0	0	41	24	2	0	0
31	GRID16	Grid Location Point 16	84	33	9	2	0	42	24	2	0	0
32	GRID17	Grid Location Point 17	70	25	1	0	0	28	24	1	0	0
33	GRID18	Grid Location Point 18	60	16	0	0	0	14	13	0	0	0
34	GRID19	Grid Location Point 19	41	40	27	9	0	22	36	19	4	0
35	HBASIN	Hermit Basin	99	42	74	12	0	89	37	45	0	0
36	LIPAN	Lipan Point	74	34	17	1	0	49	27	0	0	0
37	LITCOL	Little Colorado	1	25	1	0	0	0	3	0	0	0
38	LTCORV	Little Colorado River	34	43	59	18	0	25	37	33	2	0
39	NANMES	Nankoweap Mesa	87	43	34	12	1	68	39	30	6	0
40	NANRIV	Nankoweap at River	7	34	15	3	0	5	33	9	2	0
41	NAVA1	Navajo 1	2	14	0	0	0	1	10	0	0	0
42	NAVA2	Navajo 2	4	13	0	0	0	1	9	0	0	0
43	PHANTM	Phantom Ranch	3	12	0	0	0	1	7	0	0	0
44	PTIMPR	Point Imperial	66	38	22	6	0	25	37	14	4	0
45	PTSUBL	Point Sublime	100	35	23	0	0	94	30	0	0	0
46	RANCH	The Ranch	99	34	18	0	0	75	30	1	0	0
47	TEMBUT	Temple Butte	62	37	28	4	0	45	31	10	0	0
48	TENMED	Ten X Meadow	67	49	31	13	5	32	45	32	12	3
49	TOWER	Tower of Ra	97	44	51	17	2	90	41	44	9	0
50	TUSAYN	Tusayan	64	35	16	3	0	32	28	3	0	0
51	ZUNALF	Zuni Alpha	43	46	34	14	3	24	41	32	10	0
52	ZUNCHR	Zuni Charlie	55	28	5	0	0	32	21	0	0	0
Central												
53	COYCAN	Coyote Canyon	0	16	0	0	0	0	16	0	0	0

#	Location ID	Location Point Name	Base Year					Ten-Year Forecast				
			TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)	TAUD (%)	L _{Aeq12} (dBA)	TALA35 dBA (%)	TALA45 dBA (%)	TALA55 dBA (%)
54	DOME	The Dome	1	13	0	0	0	1	14	0	0	0
55	GC009	Tuweep (warm desert scrub)	12	19	0	0	0	21	22	0	0	0
56	GC010	Tuweep (cold desert scrub)	5	10	0	0	0	11	12	0	0	0
57	GC016	Hancock Knolls (pinyon-juniper)	2	10	0	0	0	2	10	0	0	0
58	GC017	1 km W of Kanab Point (cold desert scrub)	2	8	0	0	0	2	8	0	0	0
59	GC033	Fossil Canyon	2	12	0	0	0	1	10	0	0	0
60	GRID08	Grid Location Point 8	4	11	0	0	0	1	9	0	0	0
61	GRID09	Grid Location Point 9	1	5	0	0	0	1	3	0	0	0
62	GRID20	Grid Location Point 20	0	4	0	0	0	0	4	0	0	0
63	GRID21	Grid Location Point 21	2	14	0	0	0	2	14	0	0	0
64	GRID22	Grid Location Point 22	1	10	0	0	0	1	10	0	0	0
65	GRID23	Grid Location Point 23	2	10	0	0	0	2	10	0	0	0
66	GRID24	Grid Location Point 24	2	7	0	0	0	2	9	0	0	0
67	GRID25	Grid Location Point 25	2	7	0	0	0	2	7	0	0	0
68	GRID26	Grid Location Point 26	1	13	0	0	0	1	11	0	0	0
69	GRID35	Grid Location Point 35	0	1	0	0	0	0	1	0	0	0
70	GRID36	Grid Location Point 36	0	2	0	0	0	0	1	0	0	0
71	HAVAPT	Havasupai Point	0	0	0	0	0	0	0	0	0	0
72	HAVCAN	Havataagvitch Canyon	1	7	0	0	0	1	7	0	0	0
73	KANAPT	Kanab Point	2	8	0	0	0	1	7	0	0	0
74	MOHAWK	Mohawk Canyon	0	8	0	0	0	0	10	0	0	0
75	MOHCAN	Mohawk Canyon	0	7	0	0	0	0	8	0	0	0
76	MTSINY	Mt. Sinyala	1	0	0	0	0	1	0	0	0	0
77	NATCAN	National Canyon	1	7	0	0	0	1	8	0	0	0
78	PROCAN	Prospect Canyon	0	9	0	0	0	0	11	0	0	0
79	PRSPCT	Prospect Canyon	6	18	0	0	0	13	21	0	0	0
80	SOSUPC	South Supai Canyon	7	25	2	0	0	8	26	4	0	0