

Characteristics of Oil Sands Pit Lakes

Operator	Mine	Pit Lake	Total Volume	Water Volume	Tailings Volume	Outflow Rate	Residence Time	Initial Discharge		
			Mm ³	Mm ³	Mm ³	m ³ /s	Years	Year	Inflow Sources	
Suncor Energy	Project Millennium	Millennium	916	783	134	0.25	100	2045	CT, MO, PAW, SR, SS	
	Steepbank Mine	Pond 7	5	5	0	0.02	9	2028	CT, MO, SR, SS	
	North Steepbank Extension	North Steepbank	236	83	165	0.09	32	2039	AR, CT, CT, MFT, MO, PAW, SR, SS	
	Lease 86/17	Pond 1A		4	<4	>0	0.01	14	2032	MFT, PAW, SR, SS
		Pond 5		11	11	0	0.03	11	2022	CT, SR, SS
		Pond 6		3	3	0	0.01	13	2024	CT, SR, SS
Syncrude Canada	Mildred Lake	North Mine	240	40	200	1.32	1	2050	PAW, SR	
		Base Mine Lake	246	31	215	0.06	16	2015	CT, MFT, PAW, SR, SS	
	Aurora North Mine	Centre	270	270	0	0.15	57	2040	AR, PAW, SG, SR, SS	
		West	209	187	22	0.17	34	2040	AR, SR	
	Aurora South Mine	End-Pit Lake	440	440	0	n/a	n/a	~2050	AR, CT, PAW, SG, SR	
Shell Canada Albian Sands	Muskeg River Mine and Expansion	West	20	20	0	0.07	9	2043	AR, CT, MFT, MO, SR, SS	
		West Central	133	50	83	0.05	32	2054	CT, MO, SR	
		East Central	85	25	60	0.05	17	2054	AR, CT, MFT, MO, PL, SR, SS	
		East	101	35	66	0.02	74	2053	CT, CT, MFT, MO, SR, SS	
	Jackpine Mine – Phase 1	West	382	382	0	0.88	14	2040	BA, CT, PL, SG, SR, SS	
		East	295	227	68	0.84	11	2040	AR, CT, CT, MFT, PL, SG, SR, SS, TT	
South		117	115	2	0.13	29	2040	AR, CT, SR, SS, TT		
Imperial Oil Resources	Kearl Oil Sands Project	West	21	21	0	0.08	8	2065	CT, SR, SS	
		West Central	90	90	0	0.28	10	2065	CT, SR, SS	
		North	95	95	0	0.80	4	2065	CT, PL, SR, SS	
		North Central	18	18	0	0.52	1	2065	AR, PL, SR, SS	
		Central	421	387	34	0.51	24	2065	AR, MFT, PL, SR, SS	
		East	83	83	0	0.38	7	2065	AR, CT, SR, SS	

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			Mm ³	Mm ³	Mm ³	m ³ /s	Years	Year	Inflow Sources
Petro-Canada UTS Teck Cominco	Fort Hills Oil Sands Project	South	13	13	0	0.13	3	2024	BA, MO, PAW, SG, SR, TT
		East	15	15	0	0.14	3	2038	BA, MO, PAW, SG, SR, TT
		North	33	33	0	0.17	6	2044	BA, MO, PAW, SG, SR, TT
Canadian Natural	Horizon Project	EPL1	9	9	0	0.03	9	2053	BA, SG, SR, SS
		EPL2	461	284	177	0.27	33	2053	AR, BA, CT, MFT, MO, PAW, SG, SR, SS

NOTES:

- AR: Athabasca River water (for filling only)
- BA: Basal Aquifer
- CT: CT release water
- MFT: MFT release water
- MO: Muskeg/overburden water
- n/a: Information not available
- PAW: Process-affected water
- PL: Other pit lakes
- SG: Surficial groundwater
- SR: Surface runoff
- SS: Sand seepage
- TT: TT release water