

**Resolution Copper Project and Land Exchange
Environmental Impact Statement**

USDA Forest Service
Tonto National Forest
Arizona
December 18, 2018

Process Memorandum to File

Summary of Alternative Water Balances

This document is deliberative and is prepared by the third-party contractor in compliance with the National Environmental Policy Act and other laws, regulations, and policies to document ongoing process and analysis steps. This document does not take the place of any Line Officer's decision space related to this project.

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Purpose of Process Memorandum

Based on the information in the General Plan of Operations (GPO), the mine water balance was previously summarized for the project record in a process memorandum titled “Summary of Mine Water Balance and Sources” (Project Record #0001389, dated June 5, 2017, and revised October 9, 2017, to incorporate additional water balance information obtained from Resolution Copper Mining, LLC).

Further design of the facilities during alternatives development resulted in tailings storage strategies that differ substantially from the GPO. This further alternative design has also resulted in updates to the mine water balance. These changes include Alternative 2, which is considered to be a modification of the Proposed Action (changed from an upstream embankment to a modified centerline embankment).

The most recent and updated water balances for all project alternatives are obtained from a document titled: “Resolution Copper, Water Balance Tailings Alternatives 2, 3, 4, 5, and 6,” from WestLand Resources, Inc. (WestLand), dated September 4, 2018 (Project Record #0110517).

The purpose of this process memorandum is to summarize the most recent water balances for all alternatives. These water balances replace those in the previous process memorandum (Project Record #0001389).

Overview of Water Use for the Project

As with the previous process memorandum, the following summary is focused on the four major mine components:

- East Plant Site
- West Plant Site
- Filter plant and loadout facility
- Tailings storage facility

Tables are presented below for each component, for each alternative. In addition, revised graphics depicting the overall water use for each alternative are included as Attachment 1.

The time frames for various phases of water use are also slightly different with the September 2018 water balance data than those used in the GPO:

- Years 1 through 7: Construction and startup, 7 years total
- Years 8 through 31: Peak operations, 24 years total [Previously this phase had gone through year 36]
- Years 32 through 41: Ramp down of operations, 10 years total [Previously this phase had gone through year 45]

The following figures were specifically used to prepare this process memorandum, from WestLand (2018).

- Alternative 2: Figures 1 through 3
- Alternative 3: Figures 4 through 6
- Alternative 4: Figures 7 through 9
- Alternative 5: Figures 10 through 12
- Alternative 6: Figures 13 through 15

These figures show annual water use (acre-feet per year). For the purposes of this process memorandum these have also been translated into total volumes per phase (acre-feet) using the duration of each phase listed above. In the tables below, the italicized numbers represent the annual rates.

Alternative 2

East Plant Site

Water input at the East Plant Site (EPS) will come from two major sources: 1) groundwater inflow and 2) Central Arizona Project (CAP) deliveries or recovery wells. All groundwater inflow into the EPS will be pumped in order to dewater the underground mine infrastructure and will be sent to be used in the West Plant Site (WPS). Freshwater from the CAP and/or recovery wells will be combined with filtrate return (from the filter plant and loadout facility) and used at the EPS as mine service water.

Water will leave the EPS in four ways: 1) mine dewatering sent to the WPS, 2) as ore moisture, 3) as water lost through the shaft and vent, and 4) as water lost through refrigerant evaporation.

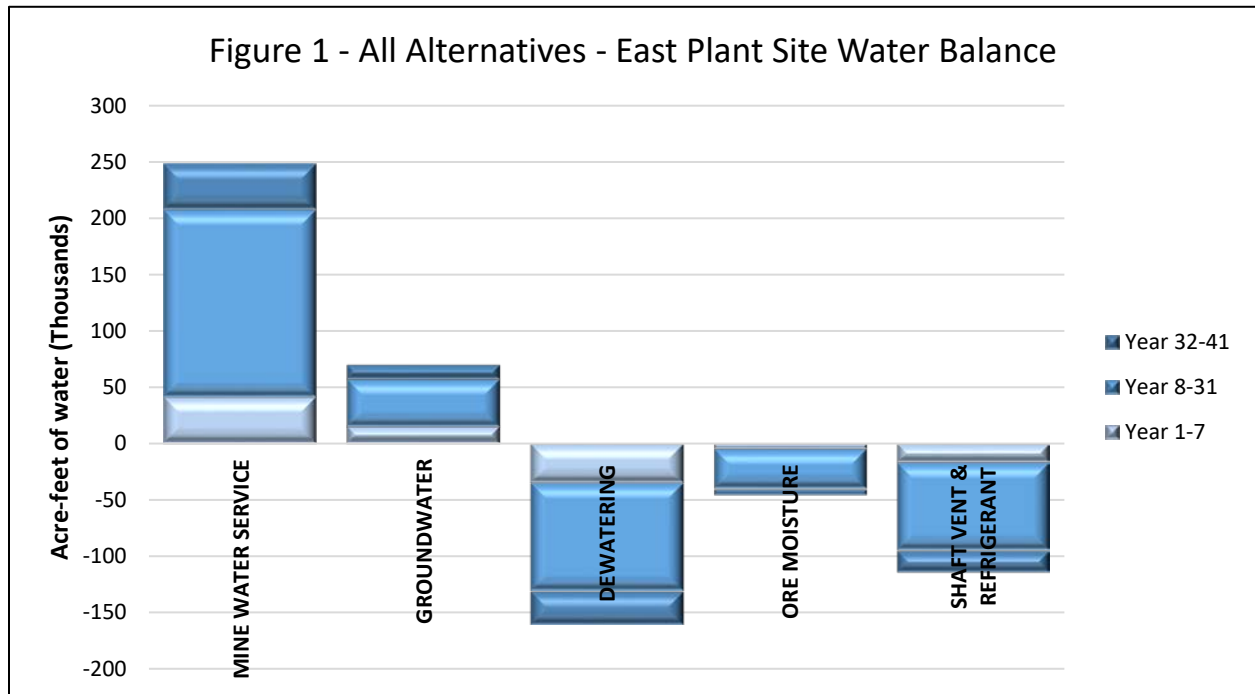
The EPS water balance is fundamentally identical among all alternatives and is shown in table 1 and figure 1.

Table 1. All Alternatives – East Plant Site Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

		Alternative 2 East Plant Site			
Phase	Mine Water Service	Groundwater	Dewatering	Ore Moisture	Shaft Vent & Refrigerant
<i>IN</i>					
Year 1–7	41,118	14,826			
	<i>5,874</i>	<i>2,118</i>			
Year 8–31	166,656	42,528			
	<i>6,944</i>	<i>1,772</i>			

		Alternative 2 East Plant Site			
Phase	Mine Water Service	Groundwater	Dewatering	Ore Moisture	Shaft Vent & Refrigerant
Year 32–41	40,810	12,760			
	4,081	1,276			
OUT					
Year 1–7			–34,769	–4,564	–16,618
			–4,967	–652	–2,374
Year 8–31			–95,808	–35,424	–77,928
			–3,992	–1,476	–3,247
Year 32–41			–29,790	–4,890	–19,110
			–2,979	–489	–1,911
LIFE OF MINE	248,584	70,114*	–160,367	–44,878	–113,656

* According to WestLand (2018), for Alternative 2 the groundwater inflow for years 32–41 is 1,276 acre-feet per year, and for all other alternatives the groundwater inflow rate for years 32–41 is 1,298 acre-feet per year. This represents the only difference among alternatives for the EPS.



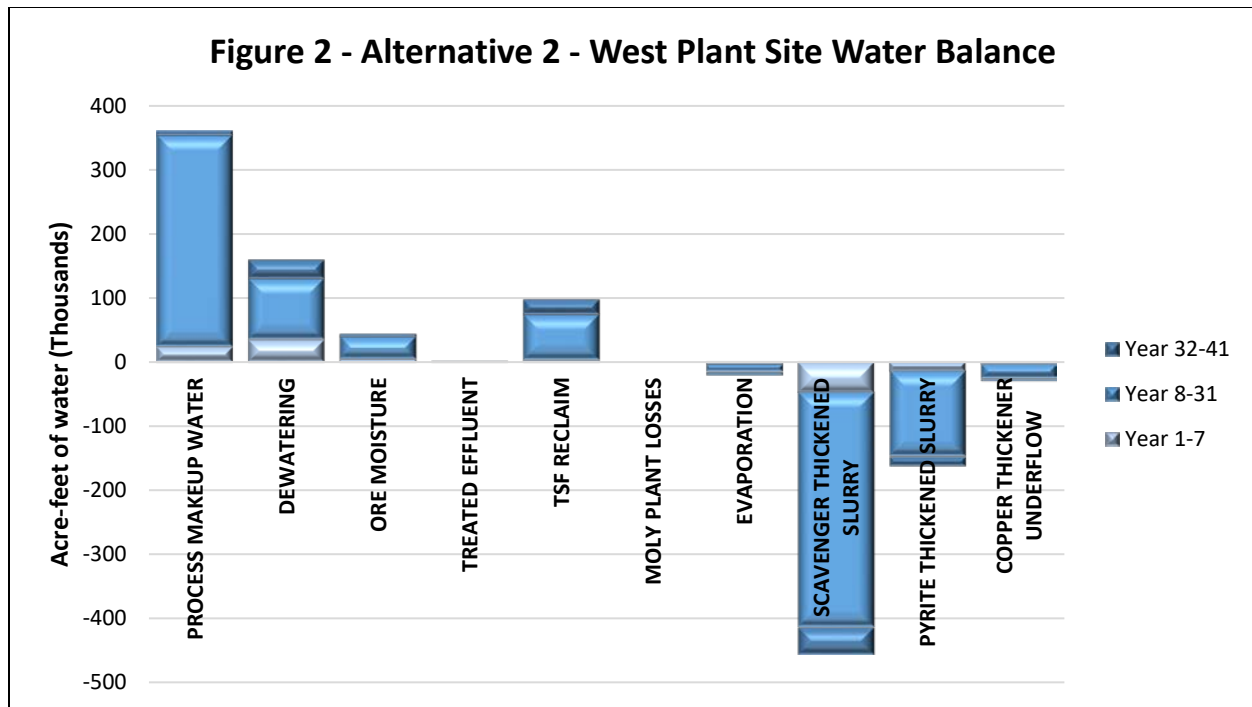
West Plant Site

Water input at the WPS will come from five sources: 1) process makeup water, 2) dewatering from the EPS, 3) ore moisture, 4) treated effluent, and 5) reclaimed water from tailings. The process makeup water includes freshwater from the CAP and/or recovery wells combined with filtrate return from the filter plant and loadout facility.

Water will leave the WPS in three ways: 1) as concentrate slurry to the filter plant and loadout facility, 2) as tailings slurry (pyrite/cleaner [PAG] and scavenger [NPAG]) to the tailings storage facility (TSF), and 3) as evaporation and molybdenum plant losses. The water balance for Alternative 2 for the WPS is shown in table 2 and figure 2.

Table 2. Alternative 2 – West Plant Site Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 2 West Plant Site										
Phase	Process Makeup Water	Dewatering	Ore Moisture	Treated Effluent	TSF Reclaim	Moly Plant Losses	Evaporation	Scavenger Thickened Slurry	Pyrite Thickened Slurry	Copper Thickener Underflow
<i>IN</i>										
Year 1–7	23,800	34,769	4,564	252	3,038					
	<i>3,400</i>	<i>4,967</i>	<i>652</i>	<i>36</i>	<i>434</i>					
Year 8–31	330,168	95,808	35,424	864	71,736					
	<i>13,757</i>	<i>3,992</i>	<i>1,476</i>	<i>36</i>	<i>2,989</i>					
Year 32–41	7,520	29,790	4,890	360	23,650					
	<i>752</i>	<i>2,979</i>	<i>489</i>	<i>36</i>	<i>2,365</i>					
<i>OUT</i>										
Year 1–7						–42	–3,388	–46,718	–13,356	–2,912
						–6	–484	–6,674	–1,908	–416
Year 8–31						–312	–11,616	–365,928	–133,512	–22,608
						–13	–484	–15,247	–5,563	–942
Year 32–41						–40	–4,840	–43,230	–14,970	–3,120
						–4	–484	–4,323	–1,497	–312
LIFE OF MINE	361,488	160,367	44,878	1,476	98,424	–394	–19,844	–455,876	–161,838	–28,640



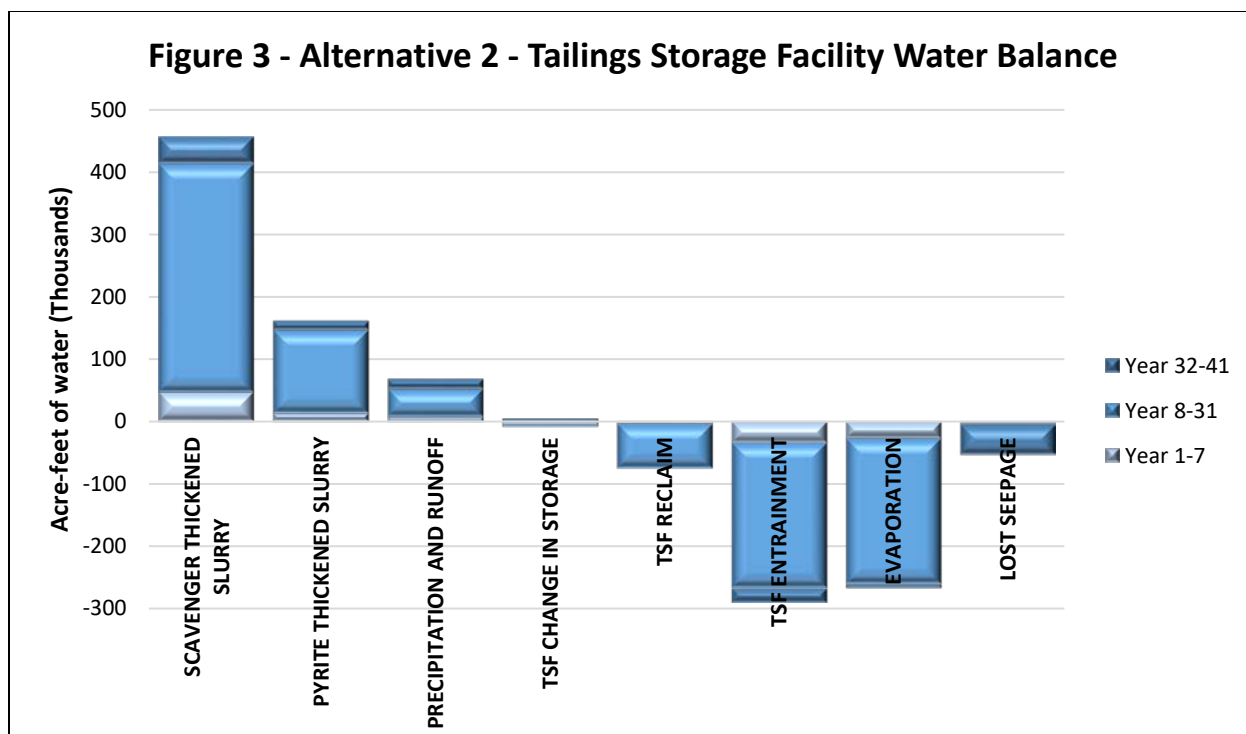
Tailings Storage Facility

Water input at the TSF will come from three sources: 1) as tailings from the WPS, 2) as precipitation, and 3) as stormwater runoff. Tailings from the WPS include both the scavenger and pyrite (also known as “cleaner”) tailings. Precipitation and stormwater runoff includes that which falls or enters into both the TSF and the seepage collections ponds.

Water will leave the TSF in three ways: 1) water reclaimed and sent back to the WPS, 2) water lost through evaporation and entrainment, and 3) water lost as seepage and not recovered. The water balance for Alternative 2 for the WPS is shown in table 3 and figure 3.

Table 3. Alternative 2 – Tailings Storage Facility Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 2 TSF								
Phase	Scavenger Thickened Slurry	Pyrite Thickened Slurry	Precipitation and Runoff	TSF Change in Storage	TSF Reclaim	TSF Entrainment	Evaporation	Lost Seepage
<i>IN</i>								
Year 1–7	46,718	13,356	7,770					
	<i>6,674</i>	<i>1,908</i>	<i>1,110</i>					
Year 8–31	365,928	133,512	44,760					
	<i>15,247</i>	<i>5,563</i>	<i>1,865</i>					
Year 32–41	43,230	14,970	16,250	5,430				
	<i>4,323</i>	<i>1,497</i>	<i>1,625</i>	<i>543</i>				
<i>OUT</i>								
Year 1–7				–4,753	–3,038	–33,061	–26,453	–539
				<i>–679</i>	<i>–434</i>	<i>–4,723</i>	<i>–3,779</i>	<i>–77</i>
Year 8–31				–3,264	–71,736	–232,608	–232,920	–3,672
				<i>–136</i>	<i>–2,989</i>	<i>–9,692</i>	<i>–9,705</i>	<i>–153</i>
Year 32–41					–23,650	–6,170	–48,530	–1,530
					<i>–2,365</i>	<i>–617</i>	<i>–4,853</i>	<i>–153</i>
LIFE OF MINE	455,876	161,838	68,780	–2,587	–98,424	–271,839	–307,903	–5,741



Filter Plant and Loadout Facility

Water input at the filter plant and loadout facility will come from a single source, as copper thickener underflow from the WPS.

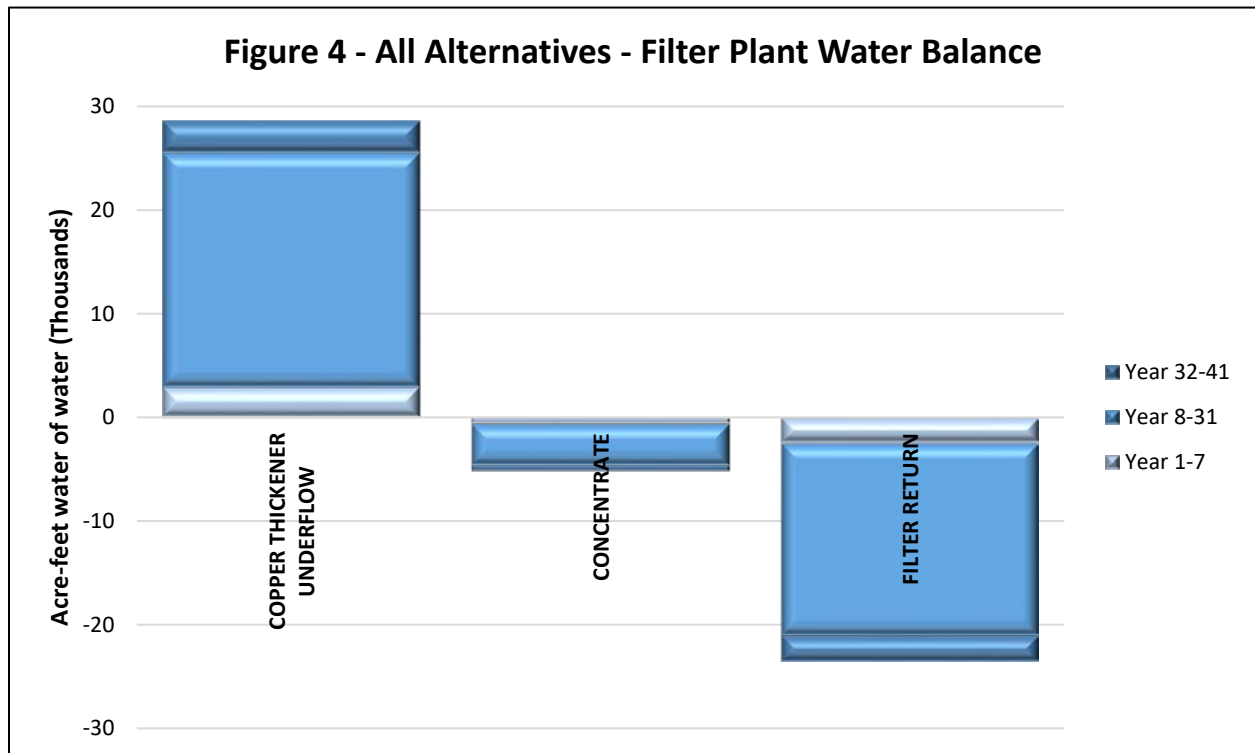
Water will leave the filter plant and loadout facility in two ways: 1) as filter return water sent back to the WPS and EPS, and 2) as water lost as concentrate.

The filter plant and loadout facility water balance is identical among all alternatives. The water balance for the filter plant and loadout facility is shown in table 4 and figure 4.

Table 4. All Alternatives – Filter Plant and Loadout Facility Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

	Alternative 2 Filter Plant		
Phase	Copper Thickener Underflow	Concentrate	Filter Return
<i>IN</i>			
Year 1–7	2,912		
	<i>416</i>		
Year 8–31	22,608		
	<i>942</i>		

	Alternative 2 Filter Plant		
Phase	Copper Thickener Underflow	Concentrate	Filter Return
Year 32–41	3,120		
	312		
OUT			
Year 1–7		-518	-2,394
		-74	-342
Year 8–31		-4,032	-18,576
		-168	-774
Year 32–41		-560	-2,570
		-56	-257
LIFE OF MINE	28,640	-5,110	-23,540



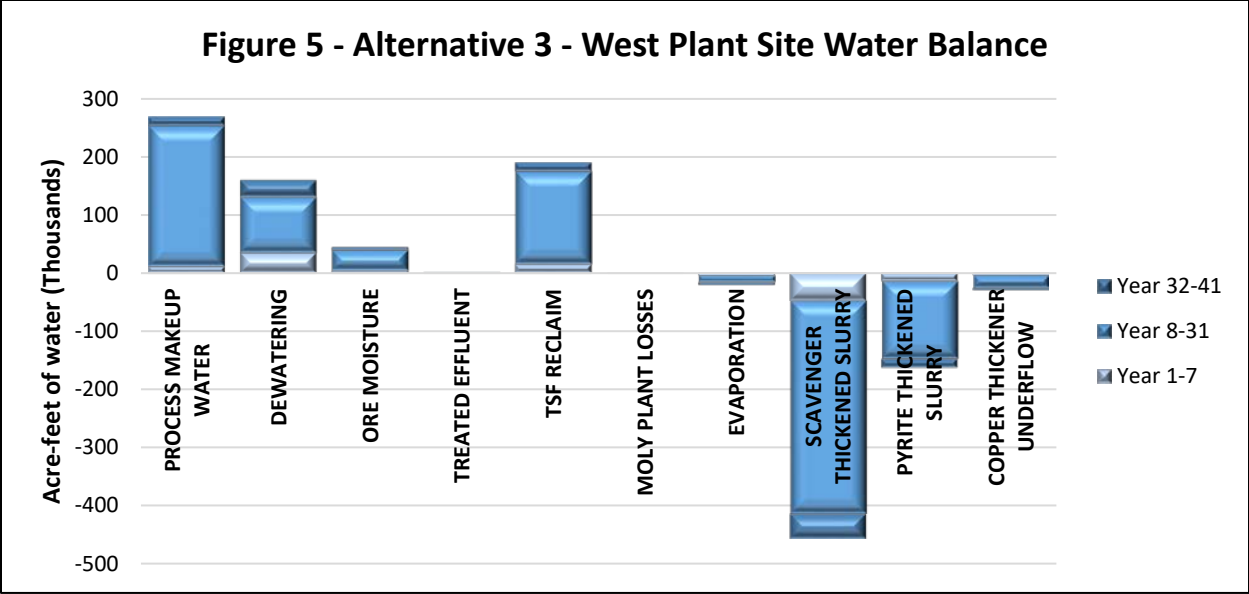
Alternative 3

West Plant Site

The categories of inputs and outputs for the WPS are identical between Alternative 3 and Alternative 2 but differ in magnitude. The water balance for Alternative 3 for the WPS is shown in table 5 and figure 5.

Table 5. Alternative 3 –West Plant Site Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

	Alternative 3 WPS									
Phase	Process Makeup Water	Dewatering	Ore Moisture	Treated Effluent	TSF Reclaim	Moly Plant Losses	Evaporation	Scavenger Thickened Slurry	Pyrite Thickened Slurry	Copper Thickener Underflow
<i>IN</i>										
Year 1–7	11,522	34,769	4,564	252	15,267					
	<i>1,646</i>	<i>4,967</i>	<i>652</i>	<i>36</i>	<i>2,181</i>					
Year 8–31	241,824	95,808	35,424	864	160,080					
	<i>10,076</i>	<i>3,992</i>	<i>1,476</i>	<i>36</i>	<i>6,670</i>					
Year 32–41	15,920	29,790	4,890	360	15,250					
	<i>1,592</i>	<i>2,979</i>	<i>489</i>	<i>36</i>	<i>1,525</i>					
<i>OUT</i>										
Year 1–7						-42	-3,388	-46,718	-13,307	-2,912
						-6	<i>-484</i>	<i>-6,674</i>	<i>-1,901</i>	<i>-416</i>
Year 8–31						-312	-11,616	-365,928	-133,512	-22,608
						-13	<i>-484</i>	<i>-15,247</i>	<i>-5,563</i>	<i>-942</i>
Year 32–41						-40	-4,840	-43,230	-14,970	-3,120
						-4	<i>-484</i>	<i>-4,323</i>	<i>-1,497</i>	<i>-312</i>
LIFE OF MINE	269,266	160,367	44,878	1,476	190,597	-394	-19,844	-455,876	-161,789	-28,640

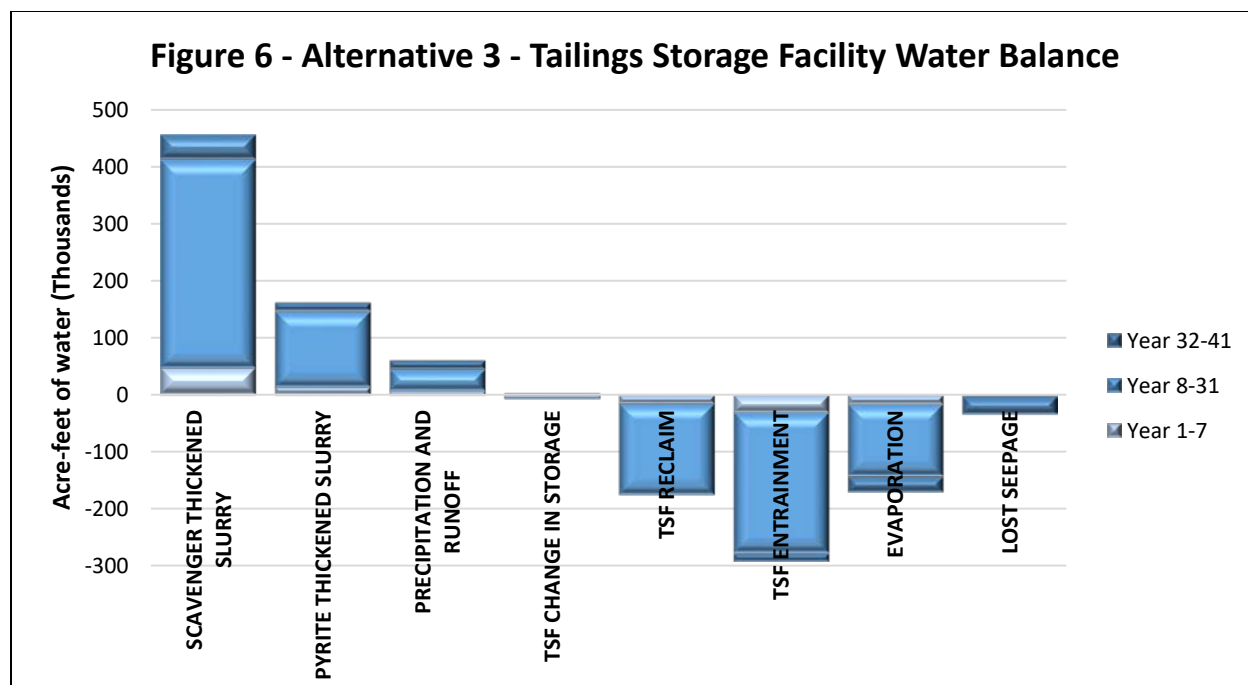


Tailings Storage Facility

The categories of inputs and outputs for the TSF are identical between Alternative 3 and Alternative 2 but differ in magnitude. The water balance for Alternative 3 for the TSF is shown in table 6 and figure 6.

Table 6. Alternative 3 –Tailings Storage Facility Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 3 TSF								
Phase	Scavenger Thickened Slurry	Pyrite Thickened Slurry	Precipitation and Runoff	TSF Change in Storage	TSF Reclaim	TSF Entrainment	Evaporation	Lost Seepage
<i>IN</i>								
Year 1–7	46,718	13,307	7,049					
	<i>6,674</i>	<i>1,901</i>	<i>1,007</i>					
Year 8–31	365,928	133,512	37,752					
	<i>15,247</i>	<i>5,563</i>	<i>1,573</i>					
Year 32–41	43,230	14,970	15,730	2,560				
	<i>4,323</i>	<i>1,497</i>	<i>1,573</i>	<i>256</i>				
<i>OUT</i>								
Year 1–7				-4,515	-15,267	-30,947	-16,072	-273
				<i>-645</i>	<i>-2,181</i>	<i>-4,421</i>	<i>-2,296</i>	<i>-39</i>
Year 8–31				-2,568	-160,080	-246,216	-126,480	-1,848
				<i>-107</i>	<i>-6,670</i>	<i>-10,259</i>	<i>-5,270</i>	<i>-77</i>
Year 32–41					-15,250	-28,280	-32,190	-770
					<i>-1,525</i>	<i>-2,828</i>	<i>-3,219</i>	<i>-77</i>
LIFE OF MINE	455,876	161,789	60,531	-4,523	-190,597	-305,443	-174,742	-2,891



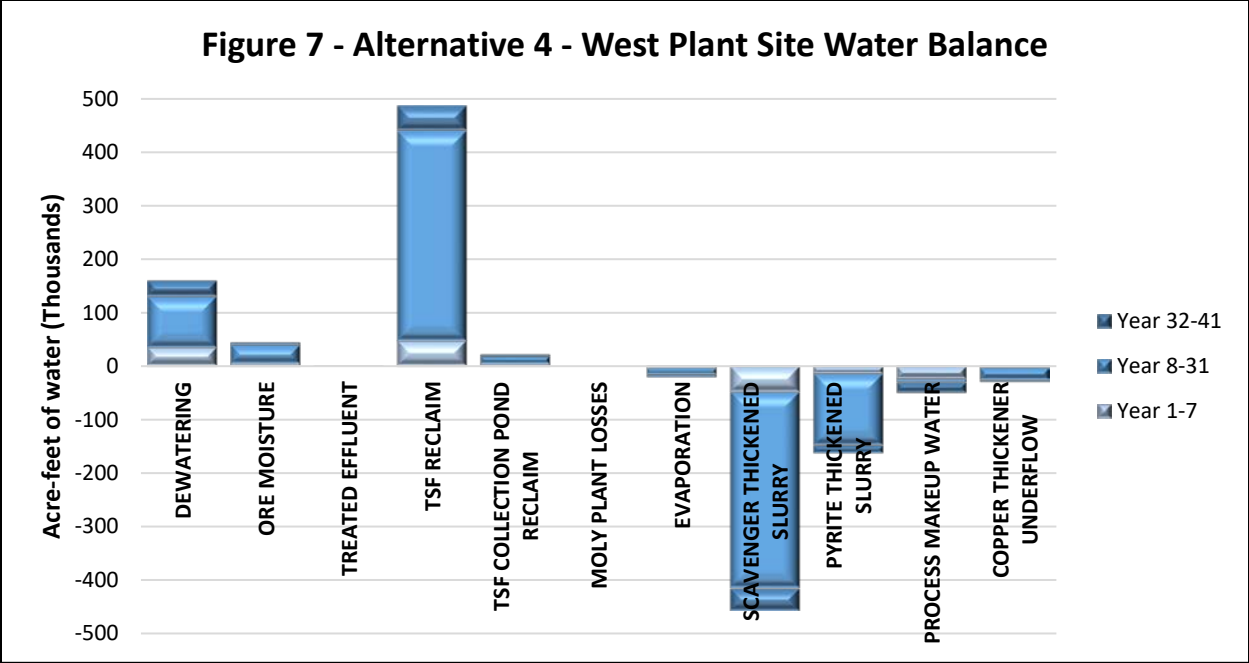
Alternative 4

West Plant Site

The water balance for Alternative 4 for the WPS differs in nature from the other alternatives and is shown in table 7 and figure 7. First, there are recovered sources of water from both the filtering of the tailings when they reach the TSF and the recovery of water from the TSF collection pond. In addition, instead of requiring process makeup water, excess process water is exported from the WPS to the EPS.

Table 7. Alternative 4 – West Plant Site Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 4 WPS											
Phase	Dewatering	Ore Moisture	Treated Effluent	TSF Reclaim	TSF Collection Pond Reclaim	Moly Plant Losses	Evaporation	Scavenger Thickened Slurry	Pyrite Thickened Slurry	Process Makeup Water	Copper Thickener Underflow
<i>IN</i>											
Year 1–7	34,769	4,564	252	47,173	4,382						
	<i>4,967</i>	<i>652</i>	<i>36</i>	<i>6,739</i>	<i>626</i>						
Year 8–31	95,808	35,424	864	393,720	14,688						
	<i>3,992</i>	<i>1,476</i>	<i>36</i>	<i>16,405</i>	<i>612</i>						
Year 32–41	29,790	4,890	360	45,840	3,390						
	<i>2,979</i>	<i>489</i>	<i>36</i>	<i>4,584</i>	<i>339</i>						
<i>OUT</i>											
Year 1–7						-42	-3,388	-47,691	-13,664	-23,436	-2,912
						-6	<i>-484</i>	<i>-6,813</i>	<i>-1,952</i>	<i>-3,348</i>	<i>-416</i>
Year 8–31						-312	-11,616	-366,288	-133,632	-6,024	-22,608
						-13	<i>-484</i>	<i>-15,262</i>	<i>-5,568</i>	<i>-251</i>	<i>-942</i>
Year 32–41						-40	-4,840	-41,940	-14,560	-19,760	-3,120
						-4	<i>-484</i>	<i>-4,194</i>	<i>-1,456</i>	<i>-1,976</i>	<i>-312</i>
LIFE OF MINE	160,367	44,878	1,476	486,733	22,460	-394	-19,844	-455,919	-161,856	-49,220	-28,640

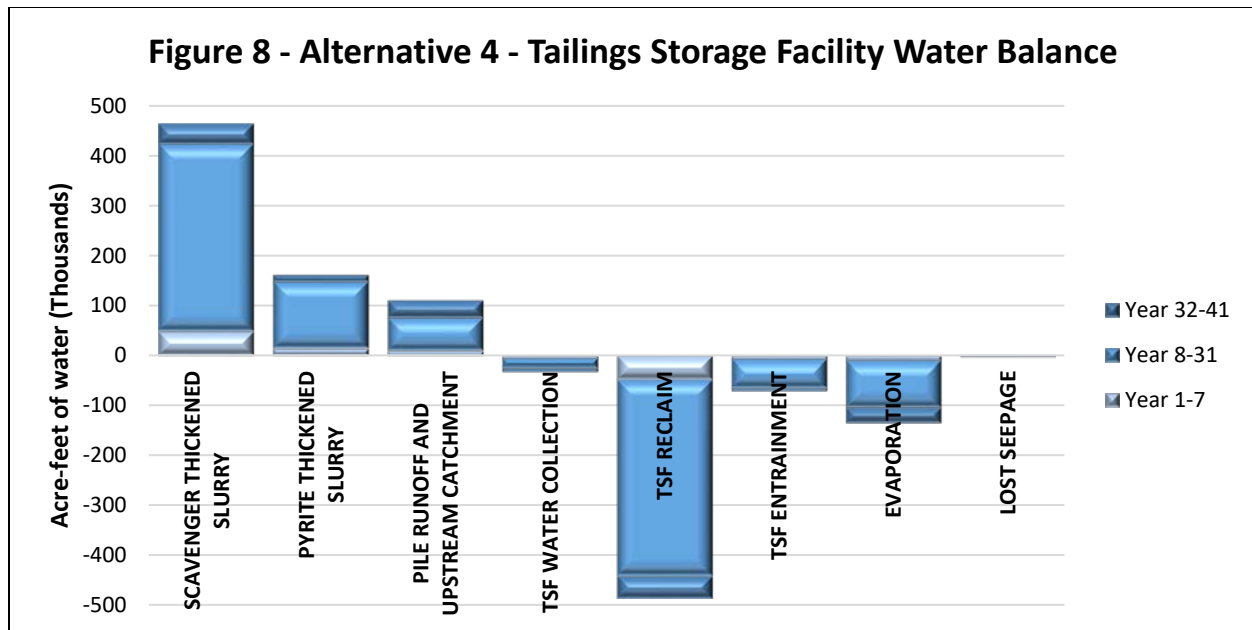


Tailings Storage Facility

The water balance for Alternative 4 for the TSF differs in nature from the other alternatives, due primarily to differences in stormwater control, and is shown in table 8 and figure 8.

Table 8. Alternative 4 –Tailings Storage Facility Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 4 TSF								
Phase	Scavenger Thickened Slurry	Pyrite Thickened Slurry	Pile Runoff and Upstream Catchment	TSF Water Collection	TSF Reclaim	TSF Entrainment	Evaporation	Lost Seepage
<i>IN</i>								
Year 1–7	47,691	13,664	9,086					
	<i>6,813</i>	<i>1,952</i>	<i>1,298</i>					
Year 8–31	366,288	133,632	65,928					
	<i>15,262</i>	<i>5,568</i>	<i>2,747</i>					
Year 32–41	41,940	14,560	35,840					
	<i>4,194</i>	<i>1,456</i>	<i>3,584</i>					
<i>OUT</i>								
Year 1–7				–5,761	–47,173	–7,147	–9,898	–462
				–823	–6,739	–1,021	–1,414	–66
Year 8–31				–19,008	–393,720	–57,360	–93,864	–1,896
				–792	–16,405	–2,390	–3,911	–79
Year 32–41				–7,860	–45,840	–6,510	–31,340	–790
				–786	–4,584	–651	–3,134	–79
LIFE OF MINE	455,919	161,856	110,854	–32,629	–486,733	–71,017	–135,102	–3,148



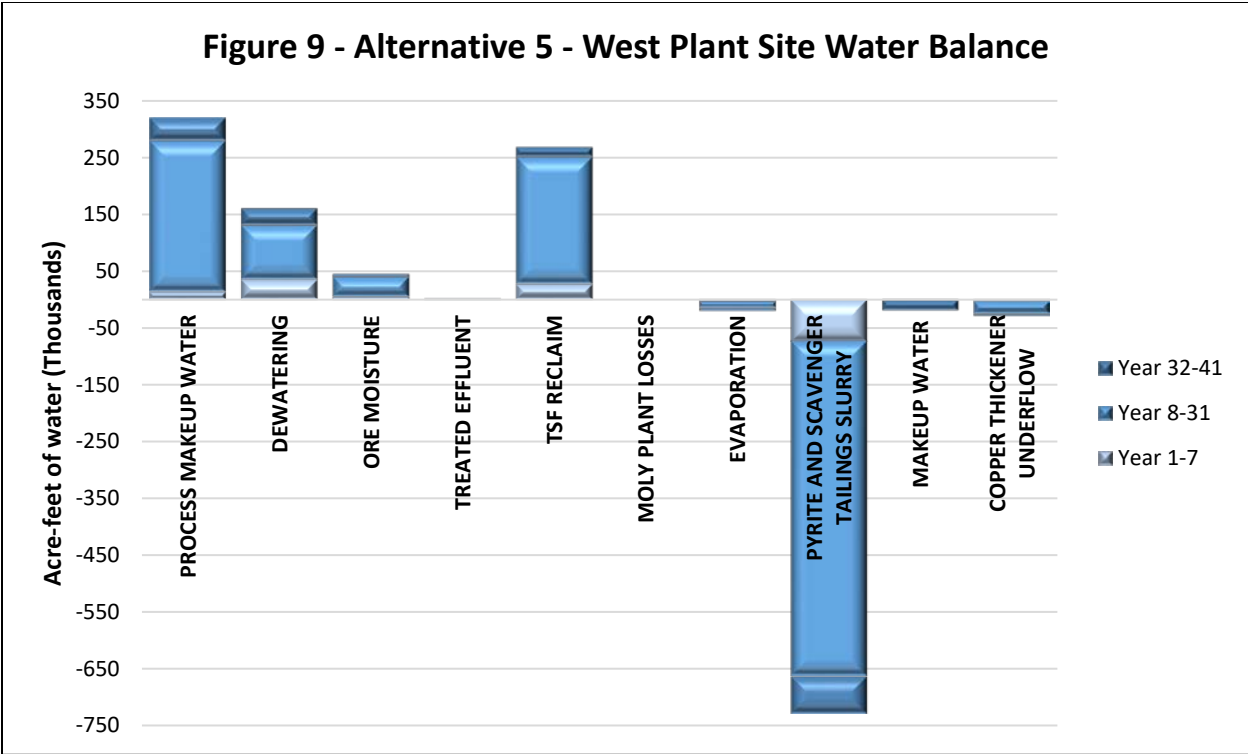
Alternative 5

West Plant Site

The water balance for Alternative 5 for the WPS differs in nature from the other slurry alternatives, and is shown in table 9 and figure 9. The primary difference is that additional makeup water must be sent to the TSF from the WPS, in order to make up for large seepage losses at the TSF location.

Table 9. Alternative 5 – West Plant Site Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 5 WPS										
Phase	Process Makeup water	Dewatering	Ore Moisture	Treated Effluent	TSF Reclaim	Moly Plant Losses	Evaporation	Pyrite and Scavenger Tailings Slurry	Makeup Water	Copper Thickener Underflow
<i>IN</i>										
Year 1–7	13,188	34,769	4,564	252	26,950					
	<i>1,884</i>	<i>4,967</i>	<i>652</i>	<i>36</i>	<i>3,850</i>					
Year 8–31	265,776	95,808	35,424	864	223,560					
	<i>11,074</i>	<i>3,992</i>	<i>1,476</i>	<i>36</i>	<i>9,315</i>					
Year 32–41	40,770	29,790	4,890	360	17,240					
	<i>4,077</i>	<i>2,979</i>	<i>489</i>	<i>36</i>	<i>1,724</i>					
<i>OUT</i>										
Year 1–7						-42	-3,388	-72,681	-686	-2,912
						-6	<i>-484</i>	<i>-10,383</i>	<i>-98</i>	<i>-416</i>
Year 8–31						-312	-11,616	-586,896	0	-22,608
						-13	<i>-484</i>	<i>-24,454</i>	<i>0</i>	<i>-942</i>
Year 32–41						-40	-4,840	-66,470	-18,560	-3,120
						-4	<i>-484</i>	<i>-6,647</i>	<i>-1,856</i>	<i>-312</i>
LIFE OF MINE	319,734	160,367	44,878	1,476	267,750	-394	-19,844	-726,047	-19,246	-28,640

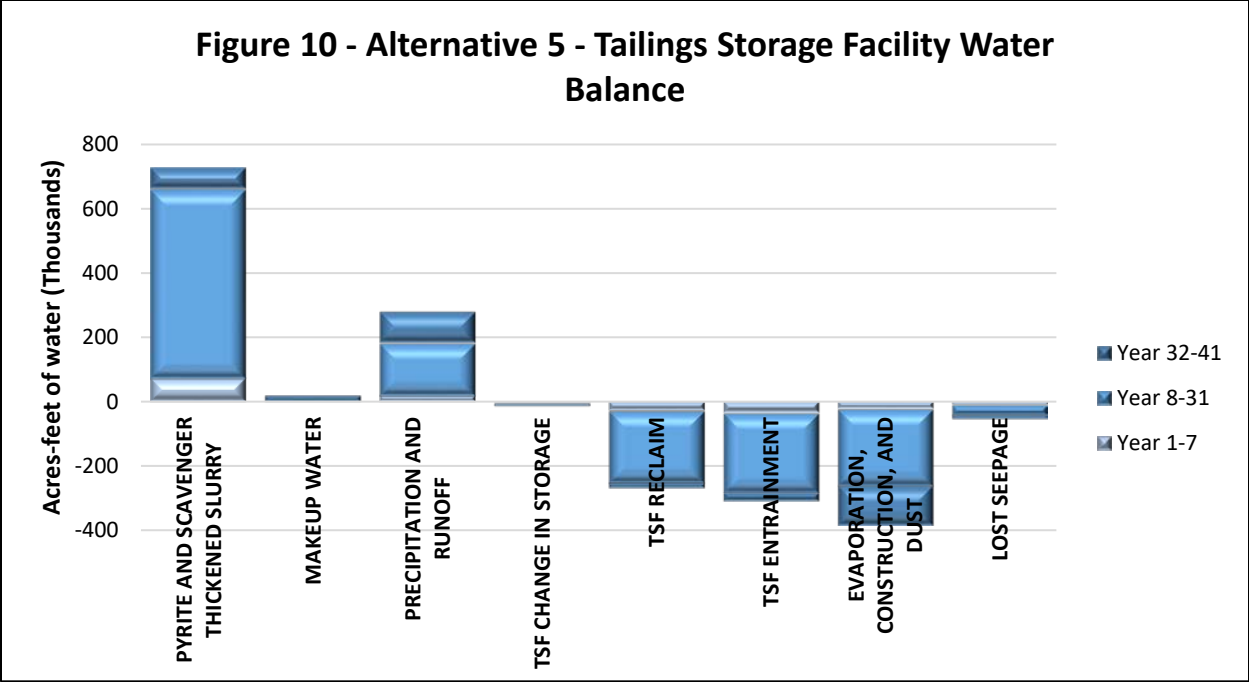


Tailings Storage Facility

The water balance for Alternative 5 for the TSF differs in nature from the other slurry alternatives and is shown in table 10 and figure 10. The primary difference is that additional makeup water must be sent to the TSF from the WPS, in order to make up for large seepage losses at the TSF location.

Table 10. Alternative 5 – Tailings Storage Facility Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 5 TSF								
Phase	Pyrite and Scavenger Thickened Slurry	Makeup Water	Precipitation and Runoff	TSF Change in Storage	TSF Reclaim	TSF Entrainment	Evaporation, Construction, and Dust	Lost Seepage
<i>IN</i>								
Year 1–7	72,681	686	19,733					
	<i>10,383</i>	<i>98</i>	<i>2,819</i>					
Year 8–31	586,896	0	162,456					
	<i>24,454</i>	<i>0</i>	<i>6,769</i>					
Year 32–41	66,470	18,560	96,450	150				
	<i>6,647</i>	<i>1,856</i>	<i>9,645</i>	<i>15</i>				
<i>OUT</i>								
Year 1–7				–2,681	–26,950	–33,754	–21,196	–8,526
				–383	–3,850	–4,822	–3,028	–1,218
Year 8–31				–7,392	–223,560	–248,040	–238,296	–32,088
				–308	–9,315	–10,335	–9,929	–1,337
Year 32–41					–17,240	–26,610	–125,210	–12,570
					–1,724	–2,661	–12,521	–1,257
LIFE OF MINE	726,047	19,246	278,639	–9,923	–267,750	–308,404	–384,702	–53,184



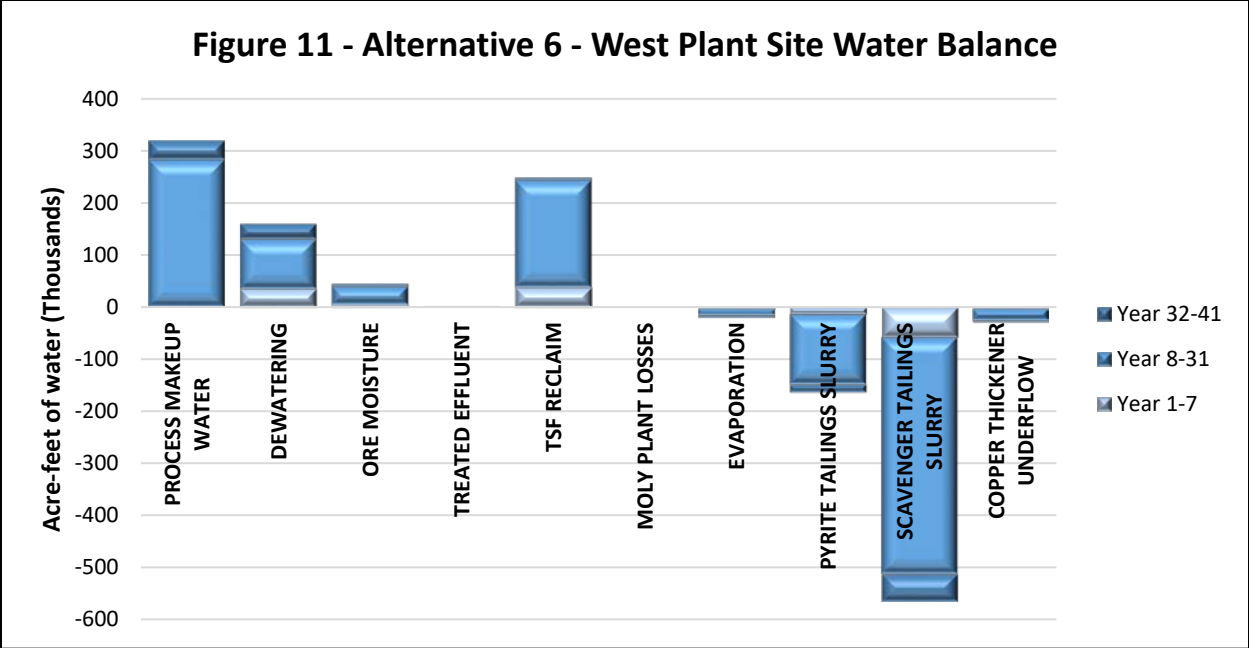
Alternative 6

West Plant Site

The categories of inputs and outputs for the WPS are identical between Alternatives 2, Alternative 3, and Alternative 6 but differ in magnitude. The water balance for Alternative 6 for the WPS is shown in table 11 and figure 11.

Table 11. Alternative 6 –West Plant Site Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 6 WPS										
Phase	Process Makeup Water	Dewatering	Ore Moisture	Treated Effluent	TSF Reclaim	Moly Plant Losses	Evaporation	Pyrite Tailings Slurry	Scavenger Tailings Slurry	Copper Thickener Underflow
<i>IN</i>										
Year 1–7	322	34,769	4,564	252	37,646					
	<i>46</i>	<i>4,967</i>	<i>652</i>	<i>36</i>	<i>5,378</i>					
Year 8–31	282,696	95,808	35,424	864	206,352					
	<i>11,779</i>	<i>3,992</i>	<i>1,476</i>	<i>36</i>	<i>8,598</i>					
Year 32–41	36,820	29,790	4,890	360	4,640					
	<i>3,682</i>	<i>2,979</i>	<i>489</i>	<i>36</i>	<i>464</i>					
<i>OUT</i>										
Year 1–7						-42	-3,388	-13,356	-57,848	-2,912
						-6	-484	-1,908	-8,264	-416
Year 8–31						-312	-11,616	-133,512	-453,072	-22,608
						-13	-484	-5,563	-18,878	-942
Year 32–41						-40	-4,840	-14,970	-53,520	-3,120
						-4	-484	-1,497	-5,352	-312
LIFE OF MINE	319,838	160,367	44,878	1,476	248,638	-394	-19,844	-161,838	-564,440	-28,640



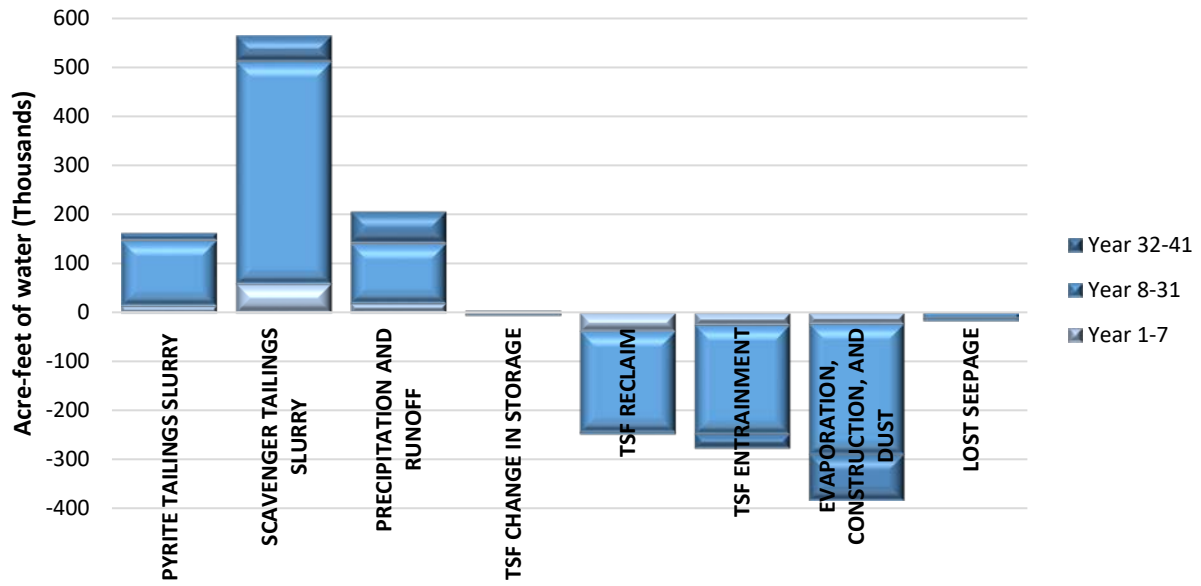
Tailings Storage Facility

The categories of inputs and outputs for the TSF are identical between Alternative 2, Alternative 3, and Alternative 6 but differ in magnitude. The water balance for Alternative 6 for the TSF is shown in table 12 and figure 12.

Table 12. Alternative 6 –Tailings Storage Facility Water Balance in acre-feet (*italicized numbers* are rates in acre-feet per year)

Alternative 6 TSF								
Phase	Pyrite Tailings Slurry	Scavenger Tailings Slurry	Precipitation and Runoff	TSF Change in Storage	TSF Reclaim	TSF Entrainment	Evaporation, Construction, and Dust	Lost Seepage
<i>IN</i>								
Year 1–7	13,356	57,848	18,123					
	<i>1,908</i>	<i>8,264</i>	<i>2,589</i>					
Year 8–31	133,512	453,072	122,664					
	<i>5,563</i>	<i>18,878</i>	<i>5,111</i>					
Year 32–41	14,970	53,520	64,510	3,060				
	<i>1,497</i>	<i>5,352</i>	<i>6,451</i>	<i>306</i>				
<i>OUT</i>								
Year 1–7				-3,136	-37,646	-25,200	-22,547	-798
				<i>-448</i>	<i>-5,378</i>	<i>-3,600</i>	<i>-3,221</i>	<i>-114</i>
Year 8–31				-2,784	-206,352	-222,600	-266,640	-10,872
				<i>-116</i>	<i>-8,598</i>	<i>-9,275</i>	<i>-11,110</i>	<i>-453</i>
Year 32–41				0	-4,640	-29,910	-95,240	-6,270
				<i>0</i>	<i>-464</i>	<i>-2,991</i>	<i>-9,524</i>	<i>-627</i>
LIFE OF MINE	161,838	564,440	205,297	-2,860	-248,638	-277,710	-384,427	-17,940

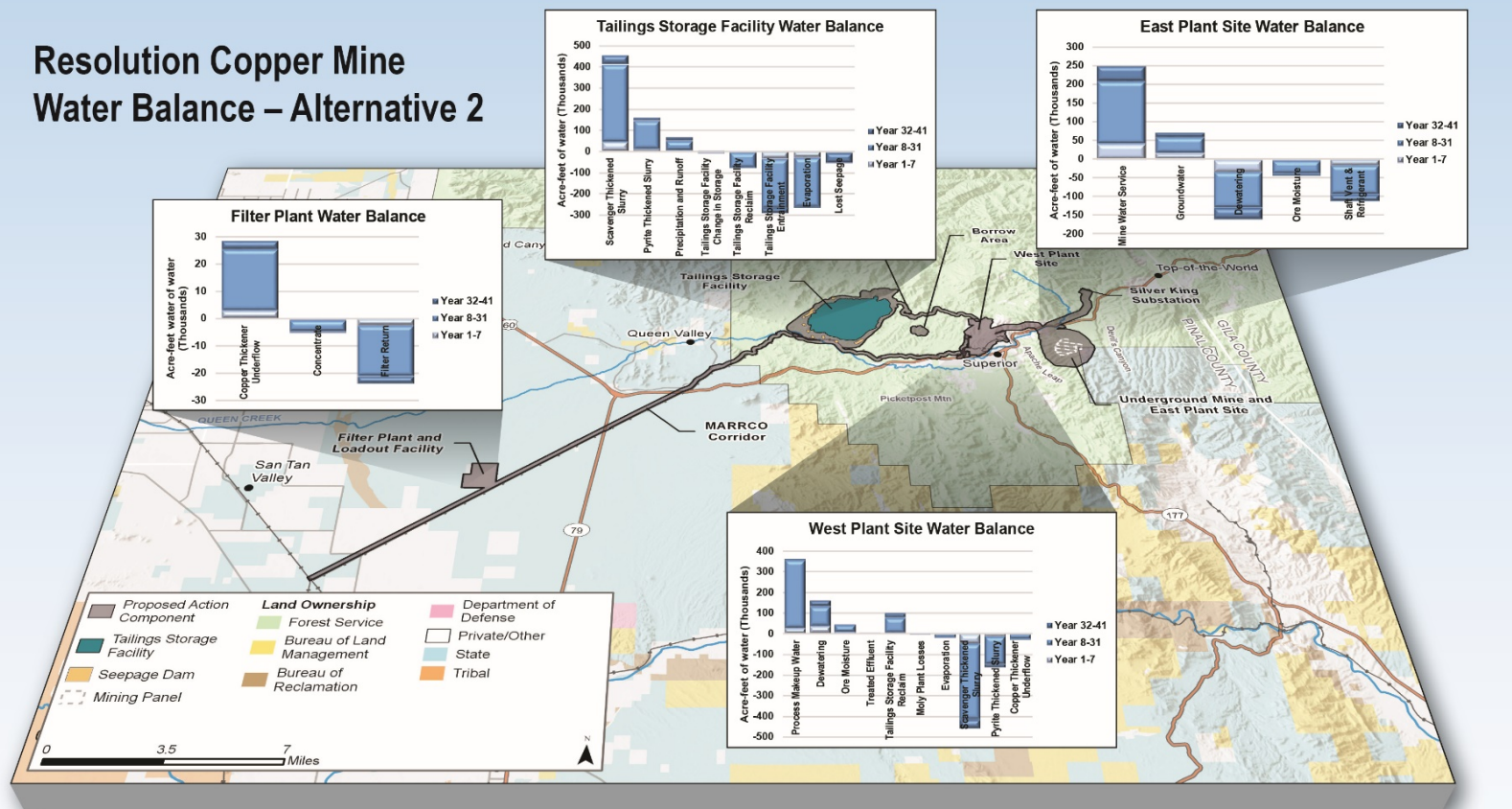
Figure 12 - Alternative 6 - Tailings Storage Facility Water Balance



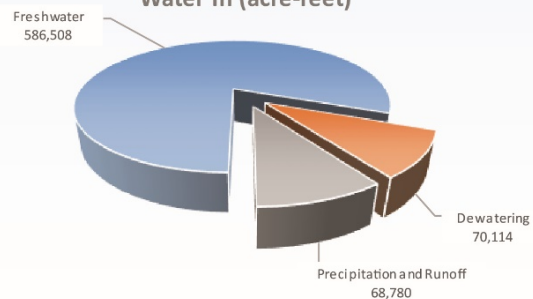
ATTACHMENT 1

WATER BALANCE GRAPHICS BY ALTERNATIVE

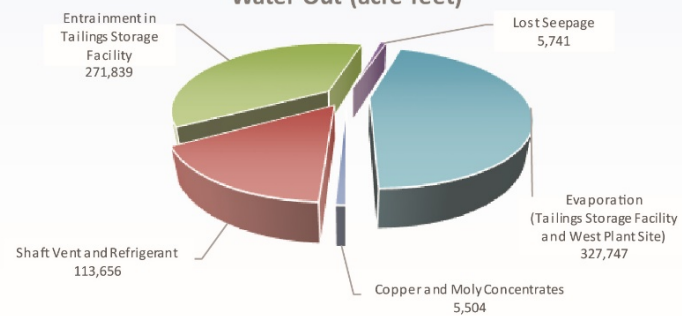
Resolution Copper Mine Water Balance – Alternative 2



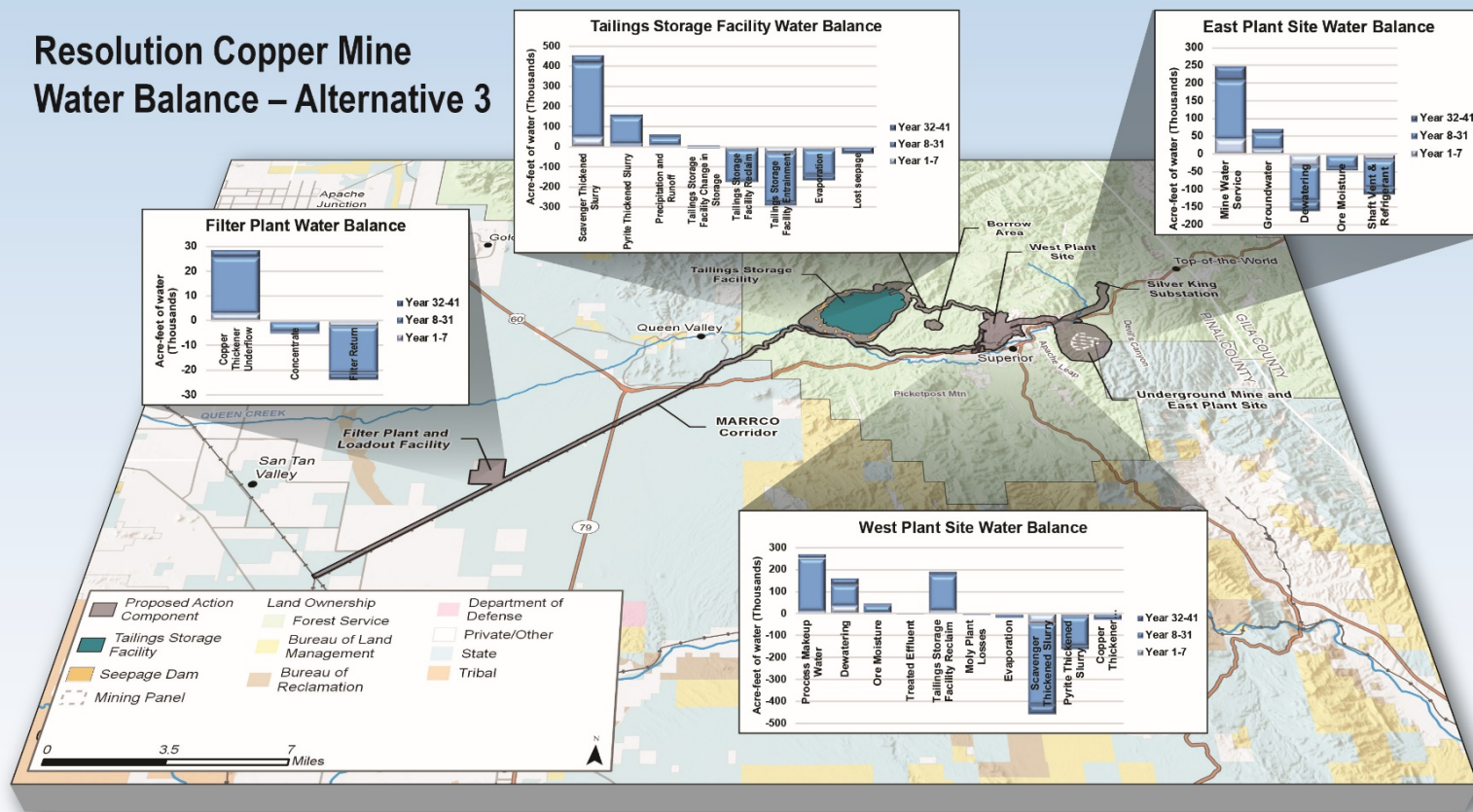
Resolution Copper Life-of-mine
Water In (acre-feet)



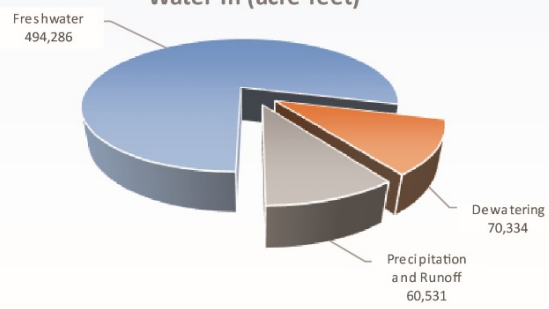
Resolution Copper Life-of-mine
Water Out (acre-feet)



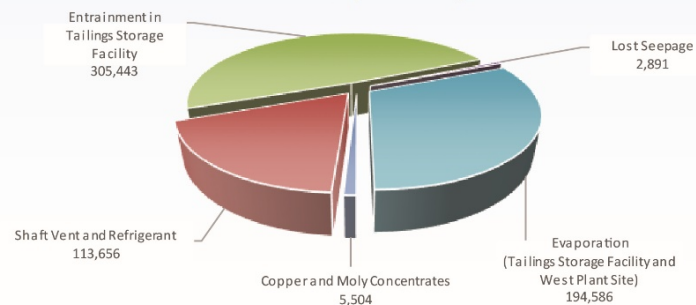
Resolution Copper Mine Water Balance – Alternative 3



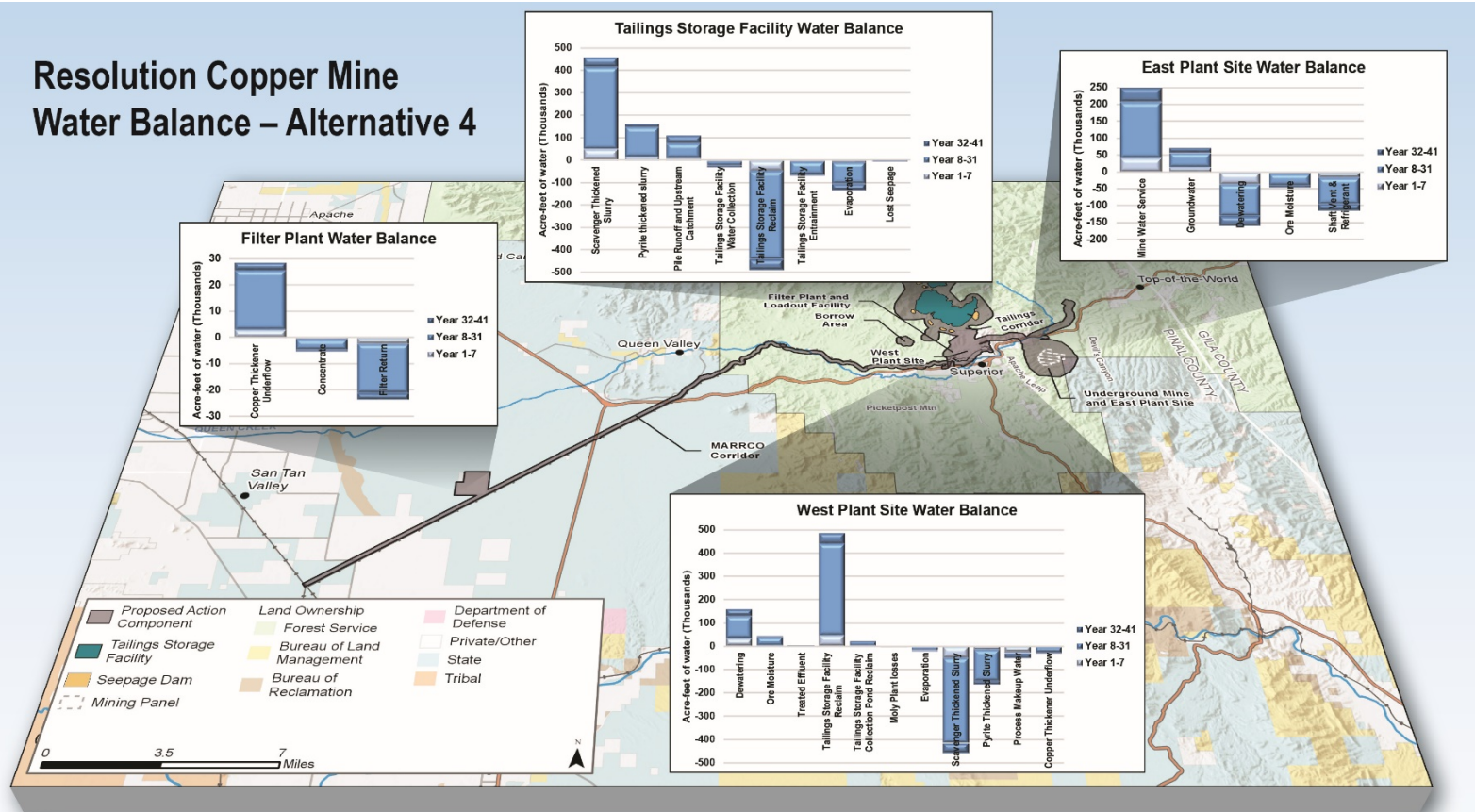
Resolution Copper Life-of-mine
Water In (acre-feet)



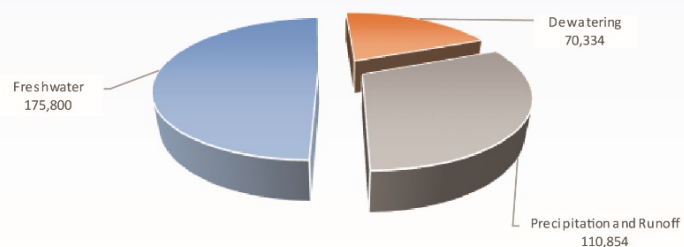
Resolution Copper Life-of-mine
Water Out (acre-feet)



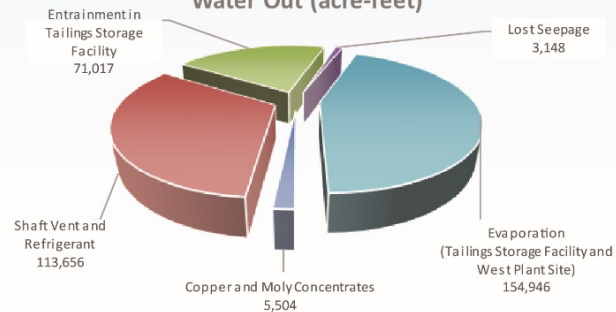
Resolution Copper Mine Water Balance – Alternative 4



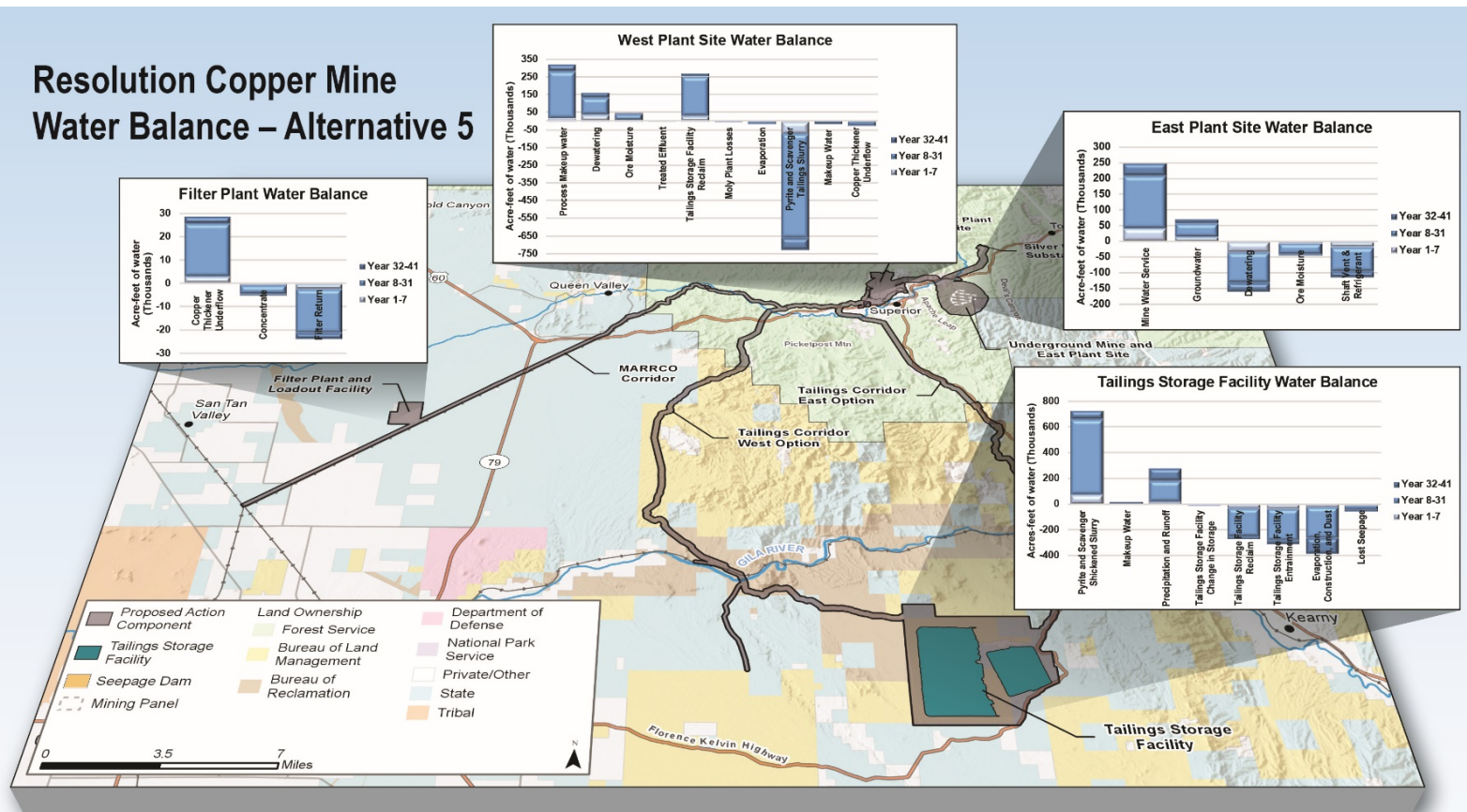
Resolution Copper Life-of-mine
Water In (acre-feet)



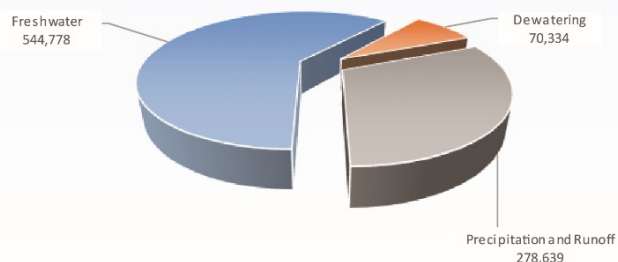
Resolution Copper Life-of-mine
Water Out (acre-feet)



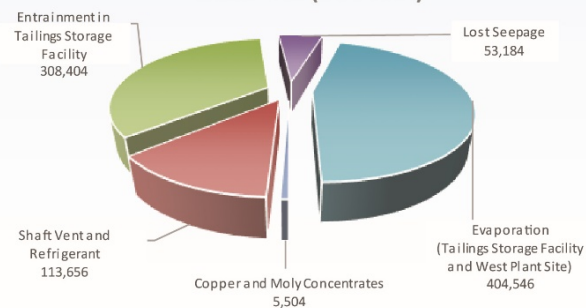
Resolution Copper Mine Water Balance – Alternative 5



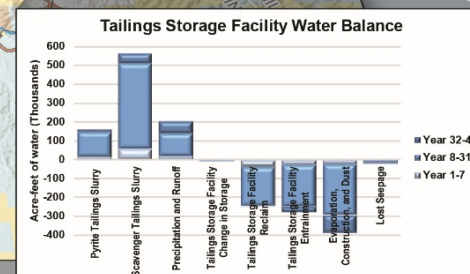
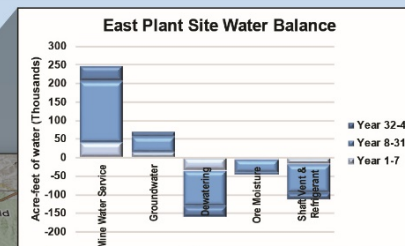
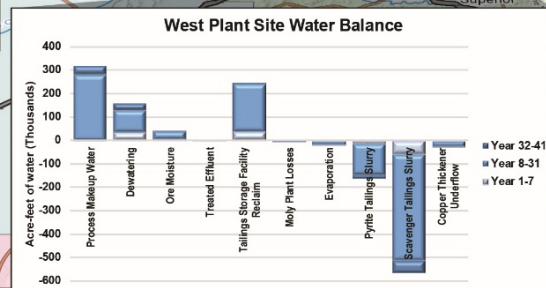
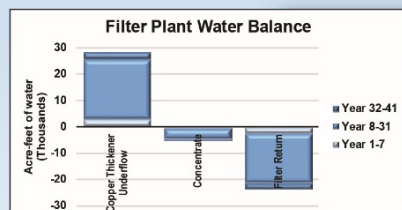
Resolution Copper Life-of-mine
Water In (acre-feet)



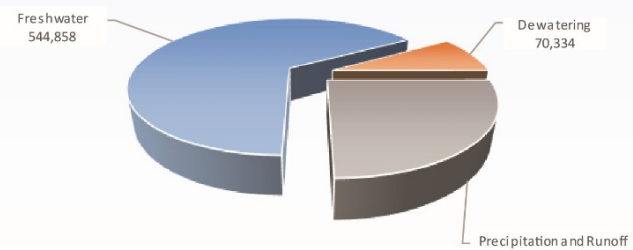
Resolution Copper Life-of-mine
Water Out (acre-feet)



Resolution Copper Mine Water Balance – Alternative 6



Resolution Copper Life-of-mine
Water In (acre-feet)



Resolution Copper Life-of-mine
Water Out (acre-feet)

