

PS 3280 Asset Retirement Obligations Guide

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Introduction

In August 2018, the Public Sector Accounting Board (“PSAB”) issued the new PS 3280 *Asset Retirement Obligations* (“ARO”) to establish an accounting standard for public sector entities that addresses the accounting and reporting of legal obligations associated with the retirement of tangible capital assets. The new standard is effective for annual financial statements relating to fiscal years beginning on or after April 1, 2022, and earlier application is permitted. Stakeholders are encouraged to obtain an early understanding of how this standard will affect them as the impact on some public sector entities may be significant.

Before Section PS 3280 was issued, there was no specific guidance in PSAB addressing the accounting for various types of asset retirement obligations. Section PS 3260 *Liability for Contaminated Sites* deals with liabilities associated with the contamination of sites. PS 3270 *Solid Waste Closure and Post-closure Liability* covers closure and post-closure liabilities associated with a currently operating or closed solid waste landfill site. These two Sections have limited applicability, and their differences from the new PS 3280 will be covered in more detail in this guide.

The new PS 3280 provides new requirements for the accounting of AROs. The standard, which is covered in more detail throughout this guide, consists of:

- 1) Clarification that this guidance deals with obligations to retire tangible capital assets of a public sector entity that are predictable and unavoidable. This requires that public sector entities:
 - i) Have a legal obligation to permanently remove a tangible capital asset from service (i.e., retire); and
 - ii) Control the tangible capital asset that needs to be retired.
- 2) Guidance on when an ARO is recognized, as outlined when the below four criteria are met:
 - i) There is a legal obligation to incur retirement costs in relation to a tangible capital asset.
 - ii) The past transaction or event giving rise to the liability has occurred.
 - iii) It is expected that future economic benefits will be given up
 - iv) A reasonable estimate of the amount can be made.
- 3) Guidance on what variables to consider when initially measuring an ARO, including:
 - i) Which costs to include;
 - ii) Estimation technique; and
 - iii) Determining the discount rate.
- 4) Guidance on subsequent measurement and measurement uncertainty.
- 5) Disclosure guidance pertaining to AROs.
- 6) Guidance on transitional provisions.

Recognition of Asset Retirement Obligations

PS 3280 applies to AROs associated with tangible capital assets controlled by the public sector entity regardless of whether they are in productive use or no longer in productive use. Only legal obligations, including obligations created by promissory estoppel, are in the scope of this standard. The standard provides that a liability for an asset retirement obligation can be incurred due to the acquisition, construction or development of a tangible capital asset or through its normal use. The scope of this standard is limited to obligations associated with tangible capital assets controlled by the entity.

Note! The scope of the standard excludes the recognition of AROs associated with tangible capital assets not controlled by the entity. This scope limitation is closely linked to the accounting treatment of capitalizing asset retirement costs on the grounds that these costs together with the cost of the related tangible capital asset provide a future economic benefit. Asset retirement costs on their own do not. Therefore, if a public sector entity assumes an asset retirement obligation relating to an asset of others, it is a liability but not an asset retirement obligation for the purposes of this standard. If an entity determines that it has an obligation to retire a tangible capital asset, which is not legally enforceable, the entity would apply Section PS 3200.

PS 3280 does not deal with costs:

- To acquire, construct, or develop the related tangible capital asset, its replacement and maintenance;
- Related to remediation of contaminated sites, which are covered in PS 3260 *Liability for Contaminated Sites*;
- Related to the improper use of a tangible capital asset;
- Related to activities necessary to prepare a tangible capital asset for an alternative use;
- Resulting from an unexpected event, such as an unexpected contamination (see PS 3260);
- Related to obligations created by waste or by-products produced by a tangible capital asset, such as sewage waste; and
- That arise solely from a plan to sell or otherwise dispose of a tangible capital asset.

Recognition Criteria

In accordance with PS 3280.09, an asset retirement obligation is recognized as at the financial reporting date when all of the following four criteria have been met:

- a) There is a legal obligation to incur retirement costs in relation to a tangible capital asset;
- b) The past transaction or event giving rise to the liability has occurred;
- c) It is expected that future economic benefits will be given up; and
- d) A reasonable estimate of the amount can be made.

Paragraph 3280.10 goes on to specify that a legal obligation establishes a clear duty or responsibility to another party that justifies recognition of a liability. For the purposes of this standard, a legal obligation can result from:

- a) Agreements or contracts;
- b) Legislation of another government;
- c) A government's own legislation; or
- d) A promise conveyed to a third party that imposes a reasonable expectation of performance upon the promisor under the doctrine of promissory estoppel.

Note! In the case of a landfill, the environmental approval typically establishes the activities required when the site stops accepting waste.

Past transaction or event

Per paragraph 3280.16, AROs can result from acquisition, construction, development, or normal use of a tangible capital asset. It is this, and not the existence of the contract, agreement, legislation or other legally enforceable right, that is the obligating event. An entity is not relieved from recognizing an ARO if it is able to postpone incurring the retirement costs. The obligating event occurs when the asset is acquired. If an asset that was not previously required to be retired must now be retired due to new legislation, an ARO would be created. This obligation would not be reported as a prior period adjustment, since new legislation is a current period event.

Past transaction or event	Example	Explanation
Acquisition	Public sector entity acquires a building containing asbestos. Regulations require that asbestos be removed in a prescribed manner.	The obligation is incurred on acquisition of the building as existing regulations require the entity to handle and dispose of the asbestos in a prescribed manner when it is disturbed. The ability to postpone the asbestos removal does not relieve the entity of the obligation.
Normal use (incurred when asset is put into production)	Public sector entity opens a waste water treatment plant. Environmental approval requires closure activities to be performed irrespective of volume of waste accepted.	The obligation is incurred in full when the entity starts accepting waste because it is linked to the normal use of the water treatment plant, but not to the volume of waste accepted.
Normal use (incurred incrementally with use)	Public sector entity opens a sewage lagoon. Environmental approval requires post-closure activities that are directly linked to the volume of waste accepted.	The obligation is incurred incrementally with use of the sewage lagoon because it is linked to the normal use of the sewage lagoon and the volume of waste accepted.

Source: PSAB In Brief: A plain and simple overview of Asset Retirement Obligations, Section PS 3280

Note! In some circumstances, a public sector entity may have doubts as to the existence of an asset retirement obligation. For example, a public sector entity may be uncertain whether it has incurred an obligation through the operation of the doctrine of promissory estoppel. The existence of any liability in such cases is contingent on a future determination by a court, a regulator or some other competent authority, or a future determination by the entity that it would be held liable. In these circumstances, PS 3300 *Contingent Liabilities* would provide additional guidance. If a liability for an ARO is recognized, then PS 3280 would be applied.

Recognition and Allocation of Asset Retirement Costs

In accordance with PS 3280.24-.25, upon initial recognition of a liability for an ARO, a public sector entity should recognize an asset retirement cost by increasing the carrying amount of the related tangible capital asset (or a component thereof) by the same amount as the liability. The entity should allocate the asset retirement cost to expense in a rational and systematic manner over the useful life of the tangible capital asset (or a component thereof). Asset retirement costs

are necessary and an integral part of owning and operating the related tangible capital asset. These costs, defined in PS 3150 *Tangible Capital Assets*, increase the carrying amount of the related tangible asset (or a component thereof). The table below illustrates the allocation of these costs.

Allocation of asset retirement costs	
Obligations associated with fully amortized tangible capital assets	An asset retirement obligation may exist in connection with a fully amortized tangible capital asset that is still in productive use. For example, a public sector entity may control a fully amortized school containing asbestos. Although the tangible capital asset is fully amortized, its cost basis exists and the liability for an asset retirement obligation related to the initial acquisition, construction or development of the tangible capital asset would increase the cost basis of that asset. The costs would be amortized over the revised estimate of the remaining useful life.
Obligations associated with unrecognized tangible capital assets	An asset retirement obligation may arise in connection with a tangible capital asset that is not recognized. In this case, the asset retirement cost would be expensed as there is no cost basis of the underlying asset to which the asset retirement costs can be attached. This is consistent with the principle that asset retirement costs are not a separate asset because there is no specific and separate future economic benefit that results from them.
Obligations associated with tangible capital assets no longer in productive use	An asset retirement obligation may arise for a tangible capital asset no longer in productive use. For example, a new legislation created after the tangible asset has been removed from service may now require its disposal in a prescribed manner and specific post-retirement activities. Given that there is no longer any period of future benefit associated with the asset retirement costs, these costs would be expensed.

Asset Retirement Obligations Associated with Landfills

PSAB decided to expand the scope of the standard to include obligations associated with solid waste landfill sites, formerly covered under PS 3270 *Solid Waste Closure and Post-closure Liability*. To do this, the Board:

- Expanded the scope to include AROs associated with tangible capital assets no longer in productive use; and
- Withdrew Section PS 3270.

Obligations for closure and post-closure care of a solid waste landfill site are of the same nature of as asset retirement obligations covered under PS 3280. In both cases, obligations are limited to legal obligations and obligations associated with the retirement of tangible capital assets controlled by the public sector entity.

Per PSAB, recognizing the liability as incurred under Section 3280, rather than incrementally with use, as required under PS 3270:

- Provides a better reflection of the extent of the entity’s liability; and
- Will enhance users’ understanding regarding the resources required to support future outflows.

Application of PS 3280 to AROs associated with landfills will require time and resources. However, the transition should be facilitated by the fact that public sector entities are already accounting for these obligations and some of the groundwork has already been done. The following table provides a comparison of the old and new sections and highlights the key implications on the financial statements.

	New Section PS 3280	Old Section PS 3270
Liability	Recognized as incurred – earlier recognition	Recognized incrementally as landfill is used – later recognition
Total liability (estimated total expenditure)	Generally the same	
Assets	Asset retirement obligations are capitalized – increase the carrying amount of the related asset	N/A
Net debt	Both methods impact net debt PS 3280 = earlier increase in net debt	
Total expenses (over time)	Generally the same	
Annual expenses	Differences in annual expenses are due to differences in methodology used in recognizing the liability	

Source: PSAB In Brief: How Asset Retirement Obligations, Section PS 3280 applies to asset retirement obligations associated with landfills

In respect of landfills pertaining to AROs, for each obligation an entity must consider whether that obligation is incurred on the landfill’s acquisition, construction or development, or normal use. When the obligation is incurred will determine the timing of recognition of the ARO. In some cases, the obligation may be incurred in full when the landfill starts accepting waste. In other cases, the obligation may be incurred incrementally with the use of the landfill if the events or transactions that create the obligation occur over more than one reporting period. The table below provides some examples.

Past transaction or event	Example	Explanation
Construction	Public sector entity constructs a landfill. Environmental approval requires that a final cover and vegetation be put in place irrespective of landfill site use.	The obligation is incurred on construction of the landfill as the environmental approval requires that the final cover and vegetation be put in place irrespective of landfill site use.
Normal use (incurred when landfill starts accepting waste)	Public sector entity opens a landfill. Environmental approval requires closure activities to be performed irrespective of volume of waste accepted.	The obligation is incurred in full when the entity starts accepting waste because it is linked to the normal use of the landfill, but not to the volume of waste accepted.
Normal use (incurred incrementally with use)	Public sector entity opens a landfill. Environmental approval requires post-closure activities that are directly linked to the volume of waste accepted.	The obligation is incurred incrementally with use of the landfill because it is linked to the normal use of the landfill and the volume of waste accepted.

Source: PSAB In Brief: How Asset Retirement Obligations, Section PS 3280 applies to asset retirement obligations associated with landfills

Note! Another consideration is how the landfill is operated. That is, the entire landfill footprint may require approval or each phase may require separate approval. Therefore, only a portion of the landfill may be used at any one time. The intent of the standard is to recognize only the costs for which a legal obligation exists and where the past transaction or event giving rise to the liability has occurred. The environmental approval needs to be reviewed to understand the entity’s obligation specific to the landfill it operates.

Relationship to Section PS 3260 Liability for Contaminated Sites

PS 3280 is closely related to PS 3260. Both standards deal with certain obligations associated with assets in productive use and those that are no longer in productive use.

There are three main considerations in determining which standard to apply:

1. The cause for the retirement or remediation obligation;
2. The type of obligation; and
3. The extent of contamination.

The table below illustrates the differences between PS 3260 and PS 3280.

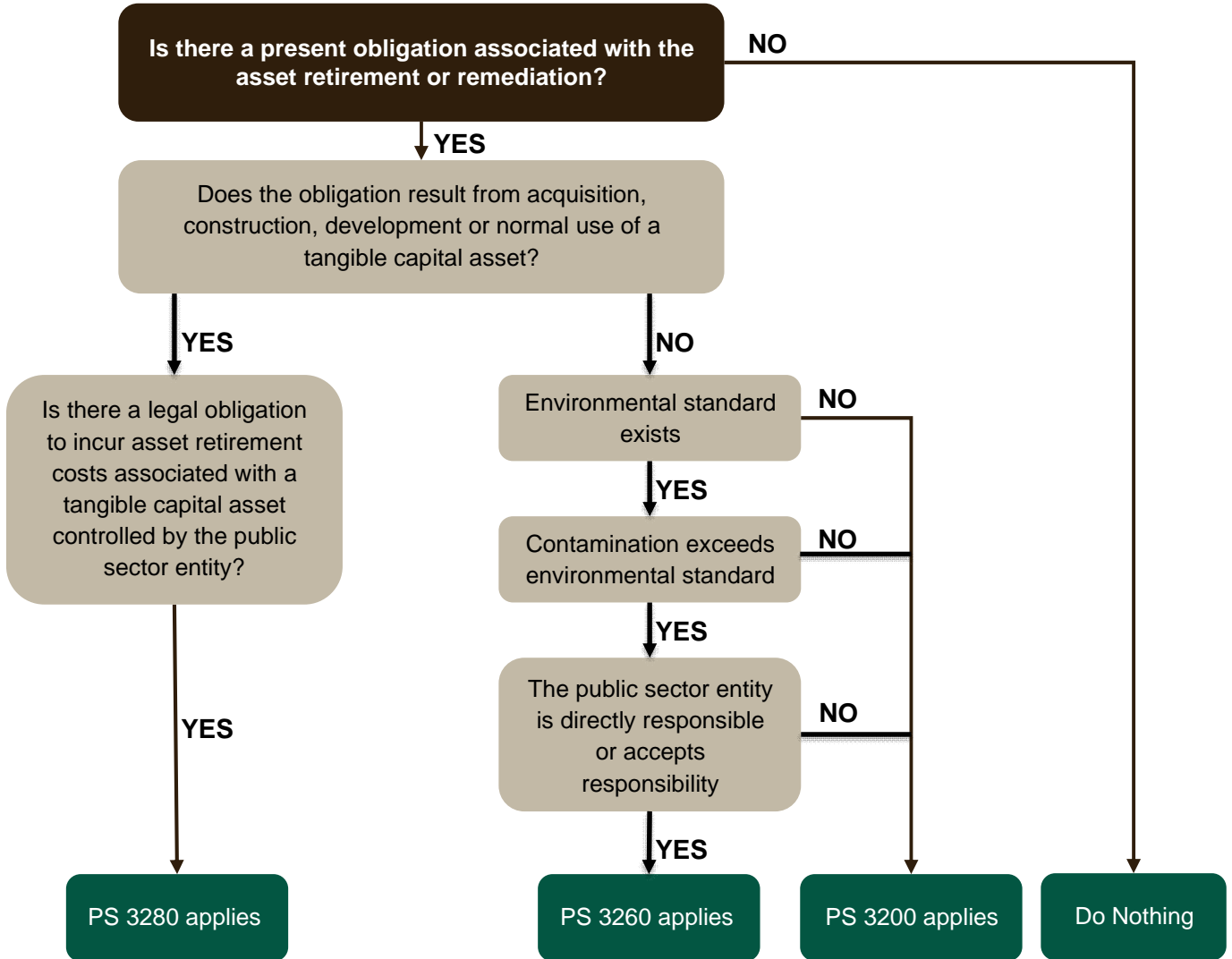
PS 3280	PS 3260
Cause for the retirement or remediation obligation	
<ul style="list-style-type: none"> • Acquisition, construction, development, normal use. • Not necessarily associated with contamination. 	<ul style="list-style-type: none"> • Unexpected event*, improper use. • Contamination needs to exist.
Type of Obligation	
<ul style="list-style-type: none"> • Legal obligation related to tangible capital asset of the entity. 	<ul style="list-style-type: none"> • Legal, constructive, and equitable obligations (direct responsibility and assumed).
Extent of contamination	
<ul style="list-style-type: none"> • Does not need to exceed the environmental standard. 	<ul style="list-style-type: none"> • Must exceed the environmental standard.

** e.g., Normal use at a fueling station could create an asset retirement obligation, however a fuel spill elsewhere could create a contaminated site.*

Source: PSAB In Brief: Asset Retirement Obligations and Liability for Contaminated Sites – determining which standard should be applied

Appendix A of PS 3280 includes a decision tree that illustrates the boundaries between this PS 3280 and PS 3260. The decision tree is reproduced in “Exhibit A: Scope of Applicability”, on the following page.

Exhibit A: Scope of Applicability



Source: CPA Handbook PS 3280 Appendix A

Measuring Asset Retirement Obligations

Initial Measurement

When measuring asset retirement obligations consider which costs to include, the estimation technique and the discount rate. Measurement should result in the best estimate of the amount required to retire a tangible capital asset at the financial statement date. Note that in accordance with PS 3280.39, a liability for an ARO should be estimated based on information available at the financial statement date. If new information becomes available between the financial statement date and the date of completion of the financial statements that would affect the estimates of a liability, this would be accounted for in accordance with PS 2400 *Subsequent Events*.

The table below documents the considerations described in PS 3280.33.

Considerations	
Which costs to include?	Includes costs that are: <ul style="list-style-type: none"> • Directly attributable to asset retirement activities (for example, payroll, materials, and overhead costs). • Based on requirements in existing agreements, contracts, legislation, and/or legally enforceable obligations.
Estimation technique	A present value technique is often the best available technique to estimate the liability, as asset retirement obligations tend to be long term in nature.
Discount rate	The discount rate reflects the time value of money and the risks specific to the liability for asset retirement obligations for which future cash flow estimates have not been adjusted.

The estimate of the liability would require professional judgement and could be supplemented by experienced, third-party quotes and, in some cases, reports of independent experts. Further professional judgement will be required in assessing the appropriate measurement technique that results in the best estimate of the amount required to retire a tangible capital asset. This may depend on the extent and complexity of the future costs, and the time frame over which activities will occur. When the cash flows required to settle or otherwise extinguish a liability are expected to occur over extended future periods, a present value technique is often the best available technique with which to estimate the measure of a liability.

When evaluating the discount rate, the assumptions applied in the cash flows should be internally consistent. For example, if the cash flows include the effect of inflation, then the discount rate also incorporates the same inflation assumptions.

Note! The passage of time also affects the measurement of asset retirement obligations. As the liability for an ARO approaches its settlement date, the liability balance increases as the discounting of the future cash flows decreases. This is often referred to as the unwinding of the discount or accretion.

Example of initial measurement

Municipality A purchases a building containing asbestos for \$6 million on April 1, 2X21. The municipality’s fiscal year-end is on March 31, 2X22. The building has a remaining useful life of 10 years, as which time the entity plans to demolish the building. Relevant legislation requires that asbestos be removed in a prescribed manner. The entity has determined that the estimated cost of this removal in 2X31 is \$1 million and the appropriate discount rate is three percent (note that this is an inflated estimate – you may obtain an estimate in current period dollars, which would necessitate inflating it to the estimated year the costs will be incurred at an appropriate inflation rate). The municipality amortizes the building over its useful life using a straight-line method.

Determine the journal entries to be recorded in the first year of owning the building.

Assessment:

Using the present value (“PV”) formula in Excel, we can determine the PV of the ARO Liability at April 1, 2X21. Our inputs have been given in the example above, where: the rate is 3%, the remaining period is 10 years, the payment is nil, the future value is a cash outflow of \$1 million, and the type is 0 as the payment is at the end of the period. The calculation results in an ARO liability of \$744,094.

Building	\$6,000,000
Rate	3%
Periods	10
Payment	0
FV	- 1,000,000
Type	0

Period	Years PV	PV April 1	Accretion Expense
2X21-2X22	10	=PV(\$D\$4,D11,\$D\$6,\$D\$7,\$D\$8)	
2X22-2X23	9	PV(rate, nper, pmt, [fv], [type])	

Accretion expense is calculated as the difference between the PV of the ARO at the beginning of the period and the end of the period. Therefore, to calculate the PV of the ARO at the end of the period using the formula above. The only input that has changed is the number of periods remaining, 9. The PV at the end of the period, March 31, 2X22 is \$766,417. The accretion expense is the difference, \$22,323.

Building	\$6,000,000
Rate	3%
Periods	10
Payment	0
FV	- 1,000,000
Type	0

Period	Years PV	PV April 1	Accretion Expense	PV March 31	Amortization
2X21-2X22	10	744,094	22,323	=PV(\$D\$4,D12,\$D\$6,\$D\$7,\$D\$8)	
2X22-2X23	9	766,417	22,993	PV(rate, nper, pmt, [fv], [type])	

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Example of initial measurement (continued)

Since amortization of the building is on a straight-line basis, it can be calculated as the sum of the building's cost and the initial PV of the ARO, divided by the useful life of 10 years. Annual amortization expense is \$674,409.

Building	\$6,000,000
Rate	3%
Periods	10
Payment	0
FV	- 1,000,000
Type	0

Period	Years PV	PV April 1	Accretion Expense	PV March 31	Amortization
2X21-2X22	10	744,094	22,323	766,417	=(SD\$3+\$E\$11)/\$D\$11

Purpose	Account Name	Debit	Credit
To record the Building	Building	\$6,000,000	
	Cash (or cash equivalents)		\$6,000,000
To record the initial ARO liability	Building ARO asset	\$744,094	
	ARO liability		\$744,094
To record the accretion expense (year 1)	Accretion expense	\$22,323	
	ARO liability		\$22,323
To record the amortization expense (year 1)	Amortization expense (6,000,000/10)	\$600,000	
	Accumulated Amortization - Building		\$600,000
To record amortization of the ARO asset (year 1)	Amortization expense (744,094/10)	\$74,409	
	Accumulated Amortization - Building ARO asset		\$74,409

Subsequent Measurement

The carrying amount of a liability for an ARO should be reconsidered at each financial reporting date. This is because a liability for an ARO is generally long term in nature and the measurement of the amount is likely to change as new information becomes available over the useful life of the tangible capital asset. Furthermore, a liability for an ARO continues to be recognized until it is settled or otherwise extinguished.

In periods subsequent to initial measurement, a public sector entity should recognize period-to-period changes in a liability resulting from:

- a) Revisions to either the timing, the amount of the original estimate of undiscounted cash flows or the discount rate, as part of the cost of the related tangible capital asset; and
- b) The passage of time as an accretion expense.

The revised carrying amount of the related tangible capital asset (or a component thereof) should be amortized in a rational and systematic manner on a go-forward basis. Once the related tangible capital asset (or a component thereof) is no longer in productive use, all subsequent changes in the estimate of the liability for AROs should be recognized as an expense in the period they are incurred.

Example of subsequent measurement

Municipality A purchases a building containing asbestos for \$6 million on April 1, 2X21. The municipality’s fiscal year-end is on March 31, 2X22. The building has a useful life of 10 years, as which time the entity plans to demolish the building. Relevant legislation requires that asbestos be removed in a prescribed manner. The entity has determined that the estimated cost of this removal in 2X31 is \$1 million and the appropriate discount rate is three percent (note that this is an inflated estimate – you may obtain an estimate in current period dollars, which would necessitate inflating it to the estimated year the costs will be incurred at an appropriate inflation rate). The municipality amortizes the building over its useful life using a straight-line method.

As at March 31, 2X26, the municipality revised the estimated cost of removal to \$1.2 million and the discount rate to four percent.

Determine the adjustment to the ARO liability. Following the March 31, 2X26 adjustment, what are the entries to record accretion expense and amortization expense for the March 31, 2X27 fiscal year-end?

Assessment:

The first component of this assessment is revising the ARO liability. Given the initial inputs, the PV of the ARO liability under original conditions is \$862,609 at March 31, 20X6.

	Initial	Revised				
Building	\$6,000,000	N/A				
Rate	3%	4%				
Periods	10	N/A				
Payment	0	N/A				
FV	-1,000,000	-1200000				
Type	0	N/A				

Period	Years	PV	PV April 1	Accretion Expense	PV March 31	Adjustment	Re
2X21-2X22	10	744,094	22,323	766,417	-		
2X22-2X23	9	766,417	22,993	789,409	-		
2X23-2X24	8	789,409	23,682	813,092	-		
2X24-2X25	7	813,092	24,393	837,484	-		
2X25-2X26	6	837,484	25,125	=PV(\$D\$4,D16,\$D\$6,\$D\$7,\$D\$8)			
2X26-2X27	5	986,313	39,453	PV(rate, nper, pmt, [fv], [type])			

The present value of the ARO liability under the revised discount rate (4%) and estimated cost (\$1,200,000) however, is \$986,313. Therefore, the difference between the revised and original ARO liability will provide us with the necessary adjustment to the ARO liability, \$123,704, as shown on the next page.

Continued on next page

Example of subsequent measurement (continued)

	Initial	Revised					
Building	\$6,000,000	N/A					
Rate	3%	4%					
Periods	10	N/A					
Payment	0	N/A					
FV	- 1,000,000	-1200000					
Type	0	N/A					

Period	Years PV	PV April 1	Accretion		Adjustment	Revised PV	
			Expense	PV March 31		March 31	Amortization
2X21-2X22	10	744,094	22,323	766,417	-	766,417	674,409
2X22-2X23	9	766,417	22,993	789,409	-	789,409	674,409
2X23-2X24	8	789,409	23,682	813,092	-	813,092	674,409
2X24-2X25	7	813,092	24,393	837,484	-	837,484	674,409
2X25-2X26	6	837,484	25,125	862,609	123,704	=PV(E4,D16,D6,E7,D8)	
2X26-2X27	5	986,313	39,453	1,025,765	-	PV(rate, nper, pmt, [fv], [type])	

The second component is determining the accretion expense for March 31, 2X27. Recall that the difference between the beginning and ending PV of the ARO liability for a given period results in the accretion expense. Subsequent to the adjustment, for the remaining periods we must calculate the ARO liability using the revised inputs where applicable. In this case the rate has increased to 4% and the FV has increased to \$1.2 million.

	Initial	Revised					
Building	\$6,000,000	N/A					
Rate	3%	4%					
Periods	10	N/A					
Payment	0	N/A					
FV	- 1,000,000	-1200000					
Type	0	N/A					

Period	Years PV	PV April 1	Accretion		Adjustment	Revised PV	
			Expense	PV March 31		March 31	Amortization
2X21-2X22	10	744,094	22,323	766,417	-	766,417	674,409
2X22-2X23	9	766,417	22,993	789,409	-	789,409	674,409
2X23-2X24	8	789,409	23,682	813,092	-	813,092	674,409
2X24-2X25	7	813,092	24,393	837,484	-	837,484	674,409
2X25-2X26	6	837,484	25,125	862,609	123,704	986,313	674,409
2X26-2X27	5	986,313	39,453	=PV(\$E\$4,D17,\$D\$6,\$E\$7,\$D\$8)			699,150
2X27-2X28	4	1,025,765	41,031	PV(rate, nper, pmt, [fv], [type])		1,066,796	699,150

The third component is our amortization expense. Recall that our original amortization expense was \$674,409. Our adjusted amortization expense can be calculated by simply adding the ARO liability adjustment and amortizing it over the remaining 5 years. Our revised amortization expense of \$699,150 is calculated as shown on the next page.

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Example of subsequent measurement (continued)

	Initial	Revised						
Building	\$6,000,000	N/A						
Rate	3%	4%						
Periods	10	N/A						
Payment	0	N/A						
FV	- 1,000,000	-1200000						
Type	0	N/A						

Period	Years PV	PV April 1	Accretion Expense	PV March 31	Adjustment	Revised PV March 31	Amortization
2X21-2X22	10	744,094	22,323	766,417	-	766,417	674,409
2X22-2X23	9	766,417	22,993	789,409	-	789,409	674,409
2X23-2X24	8	789,409	23,682	813,092	-	813,092	674,409
2X24-2X25	7	813,092	24,393	837,484	-	837,484	674,409
2X25-2X26	6	837,484	25,125	862,609	123,704	986,313	674,409
2X26-2X27	5	986,313	39,453	1,025,765	-	1,025,765	$=(\$D\$3+\$E\$11)/10+(\$H\$15/5)$

Purpose	Account Name	Debit	Credit
To record the subsequent change in ARO liability	Building ARO asset ARO liability	\$123,704	\$123,704
To record the accretion expense (year 6)	Accretion expense ARO liability	\$39,453	\$39,453
To record the amortization expense (year 6)	Amortization expense Accumulated Amortization - Building	\$600,000	\$600,000
To record amortization of the ARO asset (year 6)	Amortization expense Accumulated Amortization – Building ARO asset	\$99,150	\$99,150

Example of subsequent measurement: Settling an ARO

Given the circumstances of the previous example, what entry is required to settle the ARO on March 31, 2X31?

Assessment:

The final adjustment is the settlement of the ARO at March 31, 2X31. Here, the amount must simply be paid.

Purpose	Account Name	Debit	Credit
To record the settlement of the ARO liability (year 10)	ARO liability Cash (or cash equivalents)	\$1,200,000	\$1,200,000

Asset retirement costs are necessary and an integral part of owning and operating the related tangible capital asset. These costs increase its carrying amount. As asset retirement costs on their initial recording are capitalized and amortized over the period of benefit, changes in their estimate would be accounted for similarly. A change in measurement resulting from the passage of time (i.e. accretion expense) results from events of the accounting period. It would be expensed in the period and reported in the statement of operations. An entity will measure and incorporate changes due to the passage of time into the carrying amount of the liability before measuring changes resulting from a revision to either the timing, the amount of the original estimate of undiscounted cash flows or the discount rate.

Example of landfill asset retirement obligation

Municipality B opens a landfill site. The municipality’s fiscal year-end is December 31, 2X22. The land was purchased on January 1, 2X20, for \$2.5 million, however construction started on January 1, 2X21, and was completed on December 31, 2X22. The cost to prepare the site for use as a landfill was \$700,000. The estimated useful life of the landfill site is 10 years (depreciated using straight-line), and it will begin accepting waste on January 1, 2X23. The estimated capacity of the site is 100,000 tonnes of garbage and usage is expected to be constant over the life of the site. Regulations require that the entity perform closure and post-closure activities upon retirement of the site. Closure activities include final cover and vegetation and completing facilities for post-closure activities such as monitoring ground water and recovery of gas. Engineers have estimated that the closure costs related to final cover and vegetation in 2X34 are \$1,100,000, and the cost to build the appropriate facilities are \$450,000 (both in current year dollars, combined estimate of \$1,550,000). Inflation has been determined to be 1.15%, therefore, inflated costs in 2X34 for final cover and building the appropriate facilities are \$1,757,747. The post-closure care period is expected to be 30 years at \$25,000 per year, beginning in year 2X35. Environmental approval requires the same closure and post-closure activities irrespective of volume of waste accepted. The discount rate is three percent and payments are made at the end of the reporting period. Determine the journal entries to record the asset retirement obligation (ignoring the initial purchased asset).

Assessment:

There are several components that we must assess. The first of which is the present value of the ARO liability related to the closure costs, final cover and vegetation and completing facilities for post-closure activities. We determine this to be \$1,269,834 using the PV formula in Excel as shown below, Note that the PV is calculated using the inflated cash flows.

Inflation Rate	1.15%	PV Closure Costs	\$ 1,269,834			
Discount Rate	3.00%	PV Post-closure Costs	\$ 469,680			
Year	Years for FV	Years for PV	Cash Flow	Cash Flow plus Inflation	Net Present Value	Description of Cost
			Construction /Other	Monitoring /Maintenance		
2X34	11	11	\$ 1,550,000		\$1,757,747	=PV(\$D\$4, E7, 0, -H7, 0) Closure Costs
2X35	12	12		\$ 25,000	\$ 28,677	Post-closure maintenance
2X36	13	13		\$ 25,000	\$ 29,007	\$ PV(rate, nper, pmt, [fv], [type]) ntenance
2X37	14	14		\$ 25,000	\$ 29,340	\$ 19,397 Post-closure maintenance

The second component is that we must determine the ARO liability related to the post closure maintenance for years 2X35 to 2X64 (30 years). Recall that the rate of inflation is 1.15%, therefore, we must first calculate the inflated cash flow for each year of 2X35 to 2X64. For example, using the formula as shown on the next page, the inflated cash flow for 2X35 is \$28,677.

Continued on next page

Example of landfill asset retirement obligation (continued)

Inflation Rate	1.15%	PV Closure Costs	\$ 1,269,834				
Discount Rate	3.00%	PV Post-closure Costs	\$ 469,680				
Year	Years for FV	Years for PV	Cash Flow	Cash Flow plus Inflation	Net Present Value	Description of Cost	
			Construction /Other	Monitoring /Maintenance			
2X34	11	11	\$ 1,550,000		\$ 1,757,747	\$ 1,269,834	Closure Costs
2X35	12	12		\$ 25,000	=FV(\$D\$3,	\$ 20,113	Post-closure maintenance
2X36	13	13		\$ 25,000	D8,0,-G8,0)	\$ 19,752	Post-closure maintenance
2X37	14	14		\$ 25,000	FV(rate, nper, pmt, [pv], [type])		Post-closure maintenance
2X38	15	15		\$ 25,000		\$ 19,049	Post-closure maintenance

Then, based on the inflated cash flows for post-closure maintenance, we must determine the PV for each year from years 2X35 to 2X64, and sum them. For example, the PV for 2X35 would be \$20,113 as shown below. The PV of all years related to post-closure activities is \$469,680.

Inflation Rate	1.15%	PV Closure Costs	\$ 1,269,834				
Discount Rate	3.00%	PV Post-closure Costs	\$ 469,680				
Year	Years for FV	Years for PV	Cash Flow	Cash Flow plus Inflation	Net Present Value	Description of Cost	
			Construction /Other	Monitoring /Maintenance			
2X34	11	11	\$ 1,550,000		\$ 1,757,747	\$ 1,269,834	Closure Costs
2X35	12	12		\$ 25,000	=PV(\$D\$4,		Post-closure maintenance
2X36	13	13		\$ 25,000	E8,0,-H8,0)		Post-closure maintenance
2X37	14	14		\$ 25,000	PV(rate, nper, pmt, [fv], [type])		Post-closure maintenance
2X38	15	15		\$ 25,000		\$ 19,049	Post-closure maintenance

To determine the accretion expense, we must update the “Years for PV” column. As we are calculating the end of year balances, we must decrease each number in this column by 1. This can be done by entering 10 and dragging the formula down to fill the series as shown below. Recall that the difference between the beginning and ending balance will result in the accretion expense, \$52,185 (\$38,095 + 14,090).

Inflation Rate	1.15%	PV Closure Costs	\$ 1,307,929	Accretion	\$ 38,095		
Discount Rate	3.00%	PV Post-closure Costs	\$ 483,770		\$ 14,090		
Year	Years for FV	Years for PV	Cash Flow	Cash Flow plus Inflation	Net Present Value	Description of Cost	
			Construction /Other	Monitoring /Maintenance			
2X34	11	10	\$ 1,550,000		\$ 1,757,747	\$ 1,307,929	Closure Costs
2X35	12	11		\$ 25,000	\$ 28,677	\$ 20,717	Post-closure maintenance
2X36	13	12		\$ 25,000	\$ 29,007	\$ 20,345	Post-closure maintenance
2X37	14	13		\$ 25,000	\$ 29,340	\$ 19,979	Post-closure maintenance
2X38	15	14		\$ 25,000	\$ 29,678	\$ 19,620	Post-closure maintenance

Lastly, we must make our entry to record the amortization of the ARO liability. This will simply be the total ARO liability divided by the 10-year period of expected useful life.

Continued on next page

Example of landfill asset retirement obligation (continued)

Purpose	Account Name	Debit	Credit
To record the initial ARO liability related to closure activities (final cover and vegetation and facilities) (December 31, 2X22)	Landfill ARO asset ARO liability	\$1,269,834	\$1,269,834
To record the ARO liability related to post-closure activities (January 1, 2X23)	Landfill ARO asset ARO liability	\$469,680	\$469,680
To record the accretion expense (year 1, December 31, 2X23)	Accretion expense ARO liability	\$52,185	\$52,185
To record the amortization expense (year 1, December 31, 2X23)	Amortization expense (1,739,514/10) Accumulated Amortization – Landfill ARO asset	\$173,952	\$173,952

Measurement Uncertainty

In certain cases, there may be an indeterminate settlement date for the ARO. For example, a public sector entity may be uncertain when the cash flows associated with an asset retirement obligation will occur. Uncertainty about the timing and amount of settlement of the ARO does not remove that obligation but will affect the measurement of the liability. This may require the use of professional judgement and be supplemented by experience, third-party quotes and, in some cases, reports of independent experts. Uncertainties affecting the measurement of a liability for an ARO are disclosed in accordance with PS 2130 *Measurement Uncertainty*.

Recoveries

PS 3280 provides that where a liability for an ARO may be mitigated by a claim against a third party, the amount of the recovery is a separate asset, not an offset to the measurement of the liability. This is because in the case of AROs, typically two different counterparties are involved and there is no legal right of offset. In addition, separate risks are associated with each the obligation and the recovery. The same logic applies to recoveries associated with liabilities for remediation of contaminated sites (within the scope of PS 3260).

A recovery related to ARO should be recognized when:

- a) The recovery can be appropriately measured;
- b) A reasonable estimate of the amount can be made; and
- c) It is expected that future economic benefits will be obtained.

Note! A contingent recovery should be disclosed in accordance with PS 3320 *Contingent Assets*.

Recoveries of AROs may result when a public sector entity is able to recover asset retirement costs from a third party. Accounting for recoveries depends on whether they meet the definition of an asset or a contingent asset (PS 3210 *Assets* and PS 3320 *Contingent Assets*, respectively).

Financial Statement Presentation and Disclosure

Presentation of Asset Retirement Obligation

The initial recognition of the ARO liability must be presented as a separate line item in liabilities. The offset is recorded as a debit to the tangible capital asset.

Subsequent changes to the ARO liability and amortization on the asset retirement cost are recorded as expenses.

Disclosure

A public sector entity should disclose the following information:

- A general description of the liability for an asset retirement obligation and the associated tangible capital asset (or a component thereof);
- The amortization method used for the asset retirement costs;
- The basis for the estimate of the liability, including the estimated total undiscounted expenditures, the time period over which the undiscounted expenditures are to be incurred, the estimated timing of settlement of these expenditures and the discount rate used;
- A reconciliation of the beginning and ending aggregate carrying amount of the liability showing separately the changes attributable to:
 - The liability incurred in the current period;
 - The liability settled in the current period;
 - The change resulting from the passage of time (i.e. accretion expense); and
 - Revisions in estimated cash flows;
- How any requirements for financial assurance and funding associated with AROs, if legally required, are being met;
- When a reasonable estimate of the amount of an ARO cannot be made, the fact and the reasons therefore; and
- The estimated recoveries.

When deciding the level of detail to disclose, entities consider the usefulness of the information to readers in assessing the nature and extent of an entity's liability for AROs. It may be useful to group similar items together. If a public sector entity is subject to legal requirements to provide financial assurance and funding associated with AROs by setting aside assets designated for payments of such obligations, the entity would disclose that fact. In extremely rare cases, a public sector entity may not be able to make a reasonable estimate of the amount of the liability. When a reasonable estimate of the amount of the liability cannot be made, this fact should be disclosed in accordance with PS 3200 *Liabilities*.

Effective Date and Transition

This Section applies to annual financial statements relating to fiscal years beginning on or after April 1, 2022. Earlier application is permitted. This section may be applied using one of the retroactive, modified or prospective applications.

Retroactive application requires that an entity apply PS 3280 to events and transaction from the date of origin of such items using historical assumptions and discount rates.

Modified retroactive application requires that an entity apply PS 3280 to events and transactions from the date of origin of such items using current assumptions and discount rate.

For both the retroactive and modified approaches, the information presented for comparative purposes should be restated unless the necessary financial data are not reasonably determinable. The cumulative adjustment is reflected in the opening balance of the accumulated surplus/deficit.

For public sector entities that choose to apply prospective application, they are required to apply section PS 3280 to current and subsequent periods. They must recognize the ARO where the event giving rise to the obligation:

- Occurred on or after April 1, 2022;
- Arose prior to April 1, 2022 and the obligation has not been previously recognized; and
- Arose prior to April 1, 2022, and the previously recognized obligation requires adjustment.

In such application, no cumulative catch-up adjustment is made. Any adjustments resulting from prospective application are recorded in the statement of operations in the year of adoption.

Resources

Internal Resources

- [PS 3280 Asset Retirement Obligations : Alert](#)
- [PS 3280 Asset Retirement Obligations : Snapshot](#)

External Resources

- PS 3280 in Part IV of the CPA Canada Handbook – Public Sector Accounting
- [PSAS Basis for Conclusions – Asset Retirement Obligations](#) (August 2018)
- [PSAS Asset Retirement Obligations](#) (May 2018)
- [In Brief – Asset Retirement Obligations and Liability for Contaminated Sites – determining which standard should be applied](#) (December 2018)
- [In Brief – How Asset Retirement Obligations, Section PS 3280 applies to asset retirement obligations with landfills](#) (November 2019)

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