

Alberta Environment

Full Cost Accounting Stakeholder Workshop



Workshop Agenda

- ◆ Introduction
- ◆ Background
- ◆ Full Cost Overview
- ◆ Reporting Information Requirements
- ◆ Challenges Facing Operators
- ◆ Reporting Details
- ◆ Reporting Tool
- ◆ Readiness Survey
- ◆ Transition Support



Workshop Objectives

- ◆ To provide waterworks system owners with:
 - An understanding of Alberta Environment's full cost accounting reporting requirements.
 - An understanding of what full cost accounting for waterworks systems entails.
 - An outline of the challenges that may be faced in meeting full cost reporting requirements.
- ◆ To assess waterworks system owners readiness to meet full cost reporting requirements.



Workshop Participants

- ◆ Waterworks System Owners
- ◆ Alberta Environment Drinking Water Branch
- ◆ Corvus Business Advisors – Workshop Facilitators



Information Package

- ◆ Your organization has been provided with an information package containing:
 - Educational materials
 - Reporting Instructions
 - Reporting Forms
 - Report Examples
 - Readiness Survey



Background

- ◆ Water for Life: Alberta's Strategy for Sustainability
 - Safe, secure drinking water supply.
 - Healthy aquatic ecosystems
 - Reliable, quality water supplies for a sustainable economy



Water for Life: Core Areas of Focus

◆ Partnerships

◆ Water Conservation

◆ Knowledge & Research

- Completing an assessment of all drinking water facilities in the province.
- Determining the full cost of providing water through Alberta's water management infrastructure.



Benefits

- ◆ Provide an understanding of the cost associated with providing safe drinking water.
- ◆ Assist in making future water management and investment allocation decisions.
- ◆ Provide pricing signals regarding economic self sustainability of the system



Benefits ...continued

- ◆ Assists the public in their understanding the of relationship of the price paid for water and its underlying cost.
- ◆ Provide benchmark references.
- ◆ Assist in developing future infrastructure forecasting requirements



Implementation Philosophy

- ◆ The Water for Life strategy involves collaboration of many partners.
- ◆ System owners are under no regulatory requirement to report.
- ◆ Full cost information improves resource and management decision-making.



Evolution to Full Cost Accounting

- ◆ Reporting will evolve to a full cost approach.
- ◆ The pace is dependent upon the readiness of waterworks system owners to meet full cost reporting requirements.
- ◆ Tentative target April 2007 (2006 info).
- ◆ Alberta Environment will assist systems to transition to full cost accounting.



Full Cost Overview



Requirements of Water Operators

- ◆ Every water system operator must receive sufficient funds in order to:
 - ensure proper operation and maintenance of their water system;
 - develop and maintain infrastructure required to supply, treat and distribute safe potable water to users and;
 - maintain the financial integrity of the organization.

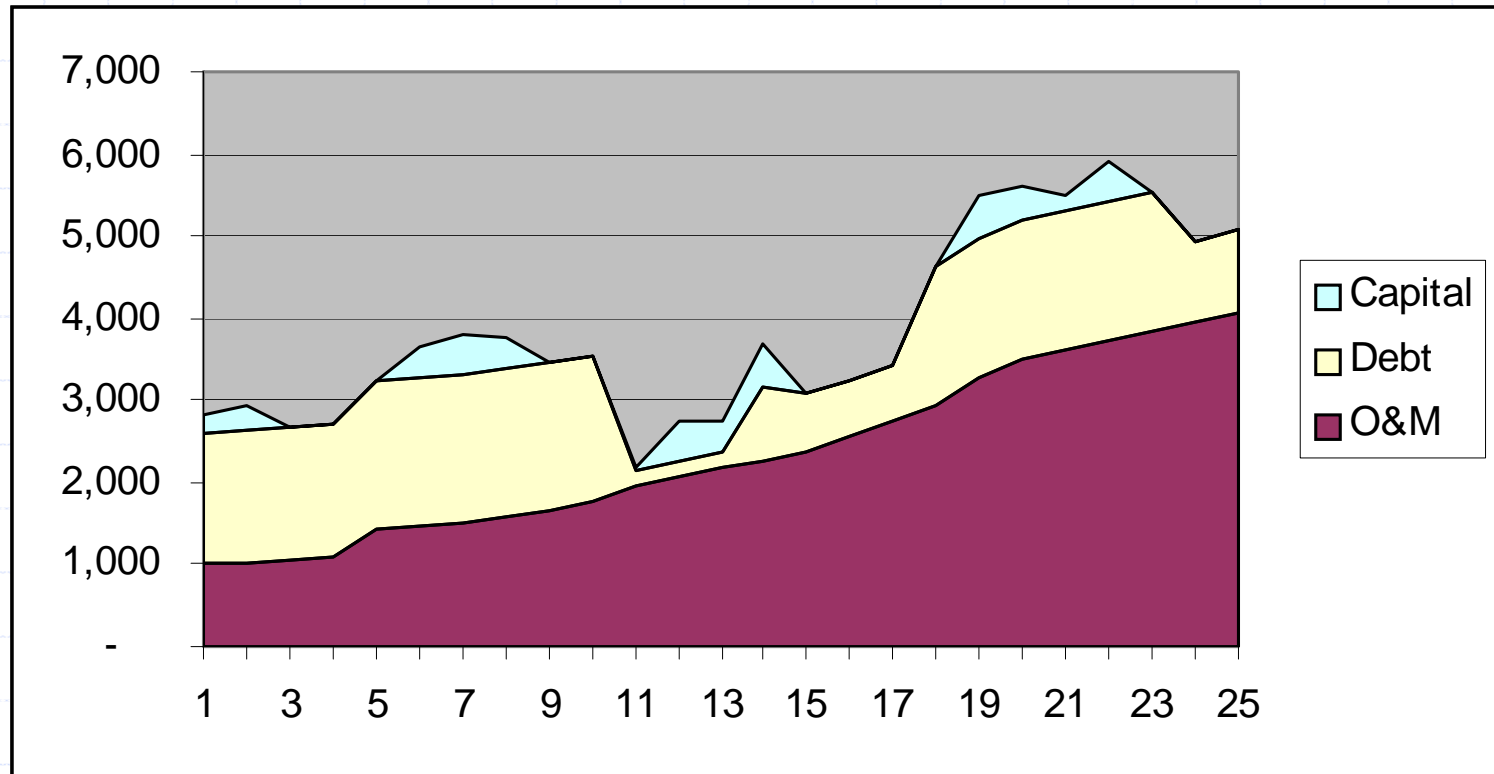


Traditional Approach - Cash Based

- ◆ Focused on the cash that was expended during a period to define cost. This typically include:
 - Operations and maintenance expenditures.
 - Debt payments.
 - Cash spent on capital upgrades
- ◆ Did not provide an objective view of cost as capital consumed in service was not considered.
- ◆ Did not consider assets / asset consumption in the financial position of the organization.



View of Cost on Cash Basis



What is the cost of this service?



Issues with the Cash Approach

- ◆ Does not provide information for decision-making.
- ◆ Divergent from Generally Accepted Accounting Principles (GAAP) that are followed by other organizations.
- ◆ Does not serve the public's interest as the costs of service and financial position of the organization is hidden.



Full Cost Approach

- ◆ Considers the value of assets in defining the financial position of the organization.
- ◆ Considers assets consumed in the in the definition of costs and the opportunity cost of asset investments.

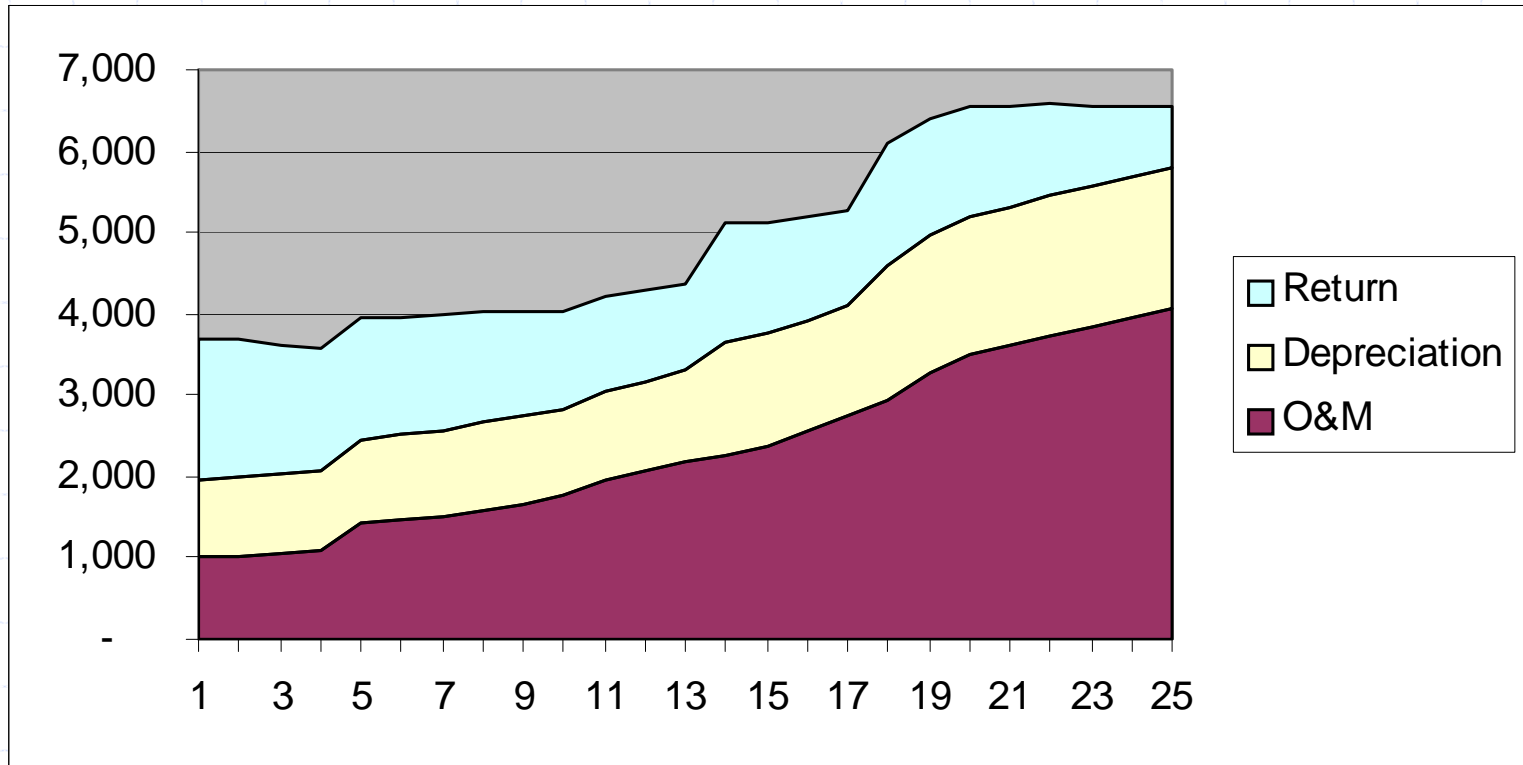


Full Cost Approach

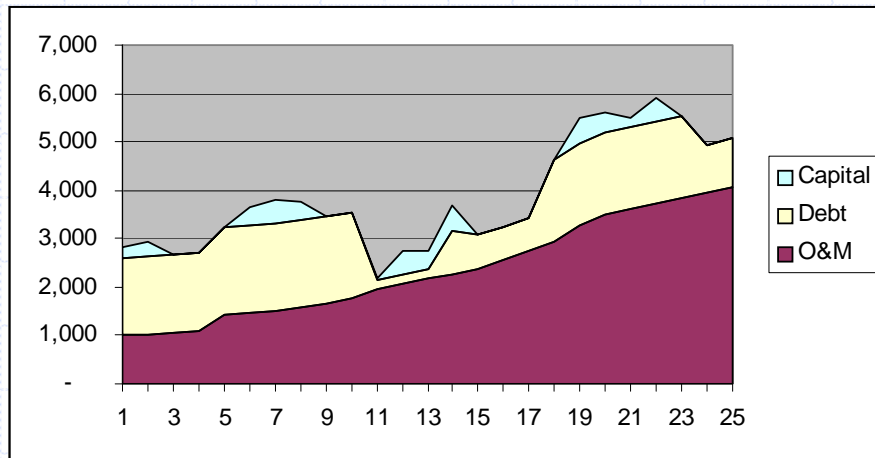
- ◆ Is used by most non public organizations.
- ◆ Is now advocated by PSAB (Public Sector Accounting Board) for public sector organizations.
 - Provides the public with a sense of financial position on the organization and cost of service.
 - Shows accountability for assets, liabilities and costs.
 - Provides information for better decision-making.



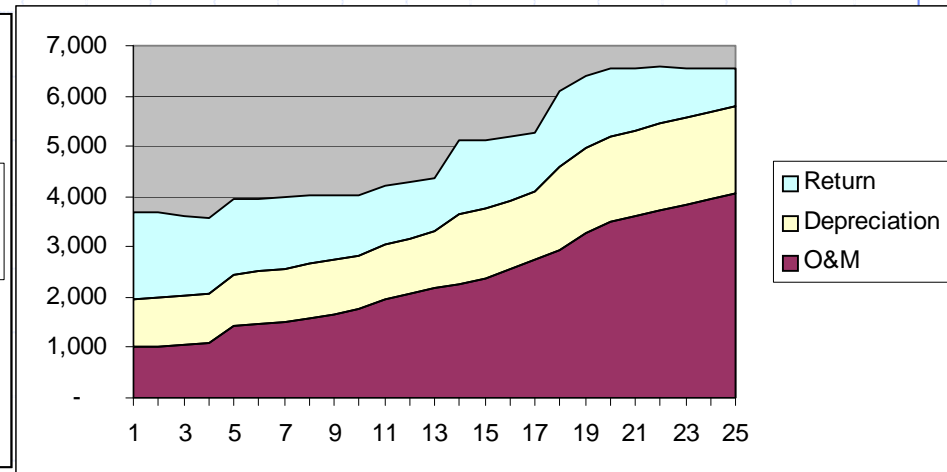
View of Cost on a Full Cost Basis



Comparison of Information



Cash Basis



Full Cost Basis

◆ Which is the clearer picture of service cost?



Overview of Information Required for Cost Reporting



Information Classification & Structure

- ◆ Water system operator will classify their costs differently.
- ◆ Information structures may reflect organizational units, locations, processes etc.
- ◆ The new reporting structure will classify costs into 5 broad categories: source of supply, water treatment, distribution, customer accounts, administration.



Reporting Classes

Source of
Supply

Water
Treatment

Distribution

Customer
Accounts

Administration



Source of Supply Classification

- ◆ Costs at the source of supply up to but excluding the water treatment plant(s).
- ◆ Includes operations, repairs, inspections, materials, supplies, utility costs, contract services.
- ◆ Facilities include raw water intake, source drawing facilities (underground water), screening, pumping, & conveyance to the treatment facility.



Water Treatment Classification

- ◆ Includes removal of particulate or inactivation of micro-organisms during water treatment.
- ◆ Includes sampling & testing including supply, process & distribution tests for water treatment effectiveness.
- ◆ Includes operations, repairs, inspections, chemicals, utility costs, contract services etc.
- ◆ Facilities include treatment, storage to the point of treatment compliance (CT), laboratory & testing.



Distribution Classification

- ◆ Includes costs for piping the treated water to users.
- ◆ Includes operations, repairs, inspections, materials, utility costs, contract services etc.
- ◆ Facilities include treatment water storage within the distribution system, pumping, transmission, water meters, fire protection (hydrants), sampling and testing related to maintaining distribution system integrity.



Customer Accounts Classification

- ◆ Includes costs associated with production of customer charges.
- ◆ Includes operations, inspections, materials, utility costs (telemetry), postage, contract services etc.
- ◆ Facilities include meter reading, utility billing, billing systems operation & maintenance, customer credit and collection activities, customer account inquiry, customer payment processing.



Administration Classification

- ◆ Includes all overheads and indirect services not previously outlined.
- ◆ Administration relates to general management, insurance, accounting, legal, human resources, public relations, computing systems, systems planning and engineering that is not allocated to capital expenditures.



Costs - Cash Approach



- ◆ The alternative reporting method to the utility approach.
- ◆ Cash approach costs are sub-classified into O&M, debt service, non-debt capital expenditures.



Cash Reporting Classes / Subclasses

	Operations & Maintenance	Debt Service	Non-Debt Capital Exp
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			








Operations and Maintenance

- ◆ Is the same under either the “Cash” or “Utility” reporting approach.
- ◆ Includes all operating expenditures.
- ◆ Excludes transfers to reserves, capital expenditures and debt payments (principal or interest).
- ◆ Operations & maintenance costs are broken down by classification type.



Cash Reporting Classes / Subclasses

	Operations & Maintenance	Debt Service	Non-Debt Capital Exp
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			








Debt Service

- ◆ The cash needed to meet principal and interest covenants on all outstanding debentures.
- ◆ Debt Service costs are broken down by classification type.



Cash Reporting Classes / Subclasses

	Operations & Maintenance	Debt Service	Non-Debt Capital Exp
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			



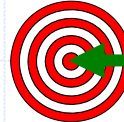




Non Debt Capital Expenditures

- ◆ Capital improvements that are financed through non-debt means whether through reserves or current revenues.
- ◆ Non Debt Capital expenditures are broken down by classification type.

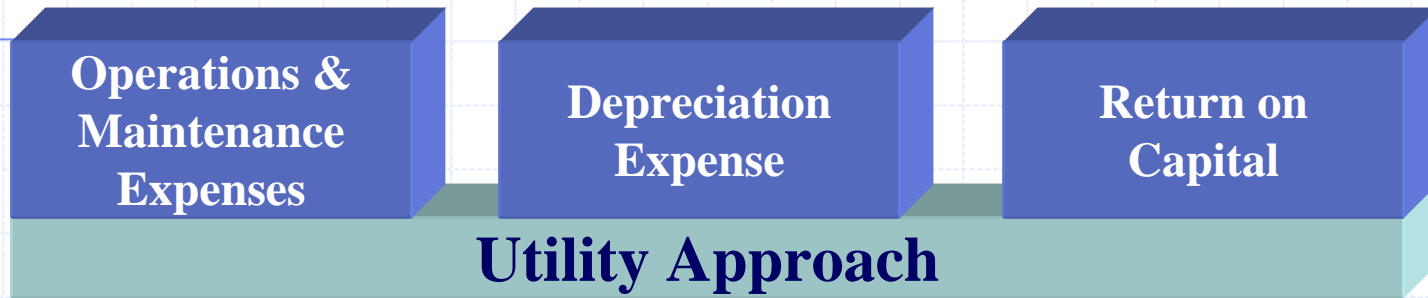


Cash Reporting Classes / Subclasses

	Operations & Maintenance	Debt Service	Non-Debt Capital Exp
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			



Costs - Utility Approach



- ◆ The recommended (preferred) reporting method.
- ◆ Utility approach costs are sub-classified into O&M, depreciation, return on capital.

Utility Reporting Classes / Subclasses

	Operations & Maintenance	Depreciation	Return on Capital
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			








Operations and Maintenance

- ◆ Is the same under either the “Cash” or “Utility” reporting approach.
- ◆ Includes all operating expenditures.
- ◆ Excludes transfers to reserves, capital expenditures and debt payments (principal or interest).
- ◆ Operations & maintenance costs are broken down by classification type.



Utility Reporting Classes / Subclasses

	Operations & Maintenance	Depreciation	Return on Capital
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			



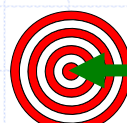




Depreciation

- ◆ Is the loss in value of capital assets and facilities due to wear and tear, decay and obsolescence.
- ◆ Applies to all capital assets (acquired assets) except for land.
- ◆ Provides for the cost of asset consumed by writing down the asset over its useful life.
- ◆ Depreciation costs are broken down by classification type.



Utility Reporting Classes / Subclasses

	Operations & Maintenance	Depreciation	Return on Capital
Source of Supply			
Water Treatment			
Distribution			
Customer Accounts			
Administration			

Return on Capital

- ◆ Capital returns is not focused on dividends paid to shareholders but rather the opportunity cost of the financial capital that is tied up in the provision of your service.



Return on Capital

- ◆ Represents the return on the net book value of each asset category to:
 - Satisfy debt payments (principal & interest)
 - Provide a return on equity at least equivalent to that obtained through an alternative investment.
 - Provide for the replacement of contributed assets.
- ◆ Return on working capital equivalent to the cost of working capital (short term interest rate)
- ◆ Return on capital is broken down by classification type except for working capital return which is allocated to administration.



Calculating Return on Capital

Description	Net Book Value of Assets	Rate of Return	Return on Capital
Debt Assets	A	1	A x 1
Equity	B	2	B x 2
Acquired Assets	C		
Contributed Assets	D	3	D x 3
Total Assets	E		
	Average Outstanding Balance		
Working Capital	F	4	F x 4

A Equals to outstanding principal on debt.

1 Equals to the average interest on outstanding debt.

B Equals NBV total acquired assets less NBV debt related assets.

2 Equals earning rate in alternative investment

D Equals NBV granted assets.





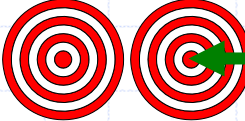
3 Equals % depreciation + % for inflation.

F Average working capital balance

4 Equals short term interest on working capital



Utility Reporting Classes / Subclasses

	Operations & Maintenance	Depreciation	Return on Capital
Source of Supply			
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Challenges of Reporting



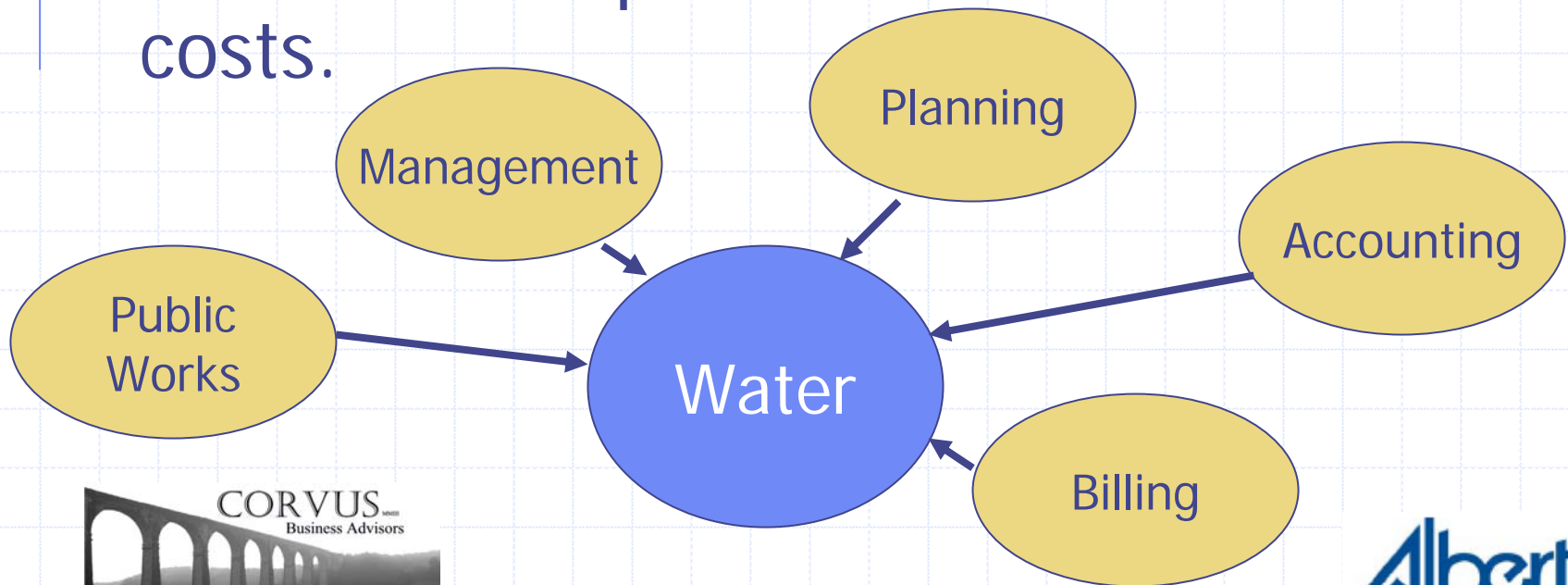
Information Gathering

- ◆ The primary difficulty that some water system owner face in the transition to full cost reporting is a lack of information.
- ◆ This lack of information may stem from:
 - How information is classified & structured.
 - Having water related costs reported across a number of subunits within your organization.
 - Using a cash based accounting approach.



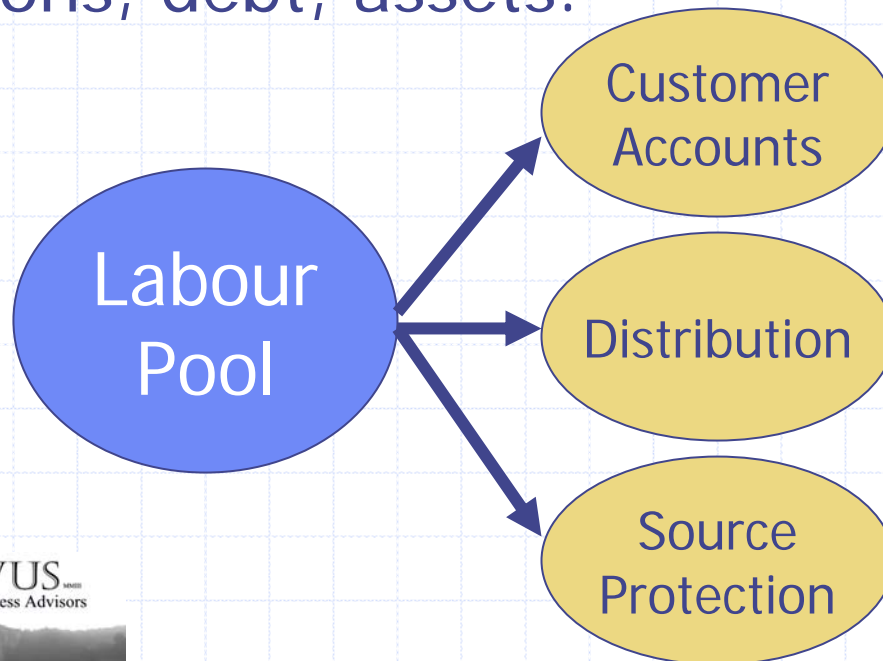
Classification & Collection Issues

- ❖ Collecting costs from across your organization.
- ❖ Largest challenge may fall in some elements of operations and administrative costs.



Classification & Collection Issues

- ◆ Splitting costs that may fall across classification categories.
- ◆ Largest challenge may fall in some elements of operations, debt, assets.



Knowledge of Assets

- ◆ In order to calculate depreciation and determine return on assets in service you need an understanding of your assets this will include:
 - Original book value of assets (depreciable assets including buildings, pipes, pumps, equipment and other facilities and non depreciable assets - land,)
 - Year asset was placed into service
 - Economic life of asset
 - Whether the asset was acquired or contributed



Knowledge of Assets ... continued

- ◆ Acquired asset cost research may require analysis of history accounting / project records.
- ◆ Contributed asset costs particularly for assets stemming from development may have to be estimated and then discounted for inflation impacts.
- ◆ See your Audit firm and Consulting Engineers for guidance.



Knowledge of Assets ... continued

System Acquired Assets	Original Book Value	Accumulated Depreciation	Net Book Value	Remaining % of Asset
Water Distribution System	\$ 1,543,357	\$ 600,587	\$ 942,770	61%
Water Supply Line	\$ 6,258,651	\$ 1,834,271	\$ 4,424,380	71%
Water Reservoir	\$ 841,429	\$ 432,637	\$ 408,792	49%
Pumping Stations	\$ 4,802	\$ 3,650	\$ 1,152	24%
Buildings & Facilities	\$ 353,581	\$ 308,021	\$ 45,560	13%
Equipment	\$ 266,966	\$ 131,906	\$ 135,060	51%
Land	\$ 738,177	\$ -	\$ 738,177	-
Subtotal	\$ 10,006,963	\$ 3,311,072	\$ 6,695,891	67%
Contributed Assets				
Water Distribution System	\$ 9,156,709	\$ 4,783,585	\$ 4,373,124	48%
Water Supply Line	\$ 4,391,500	\$ 1,463,833	\$ 2,927,667	67%
Water Reservoir	\$ 95,000	\$ 55,100	\$ 39,900	42%
Pumping Stations	\$ -	\$ -	\$ -	-
Buildings & Facilities	\$ -	\$ -	\$ -	-
Equipment	\$ -	\$ -	\$ -	-
Land	\$ -	\$ -	\$ -	-
Subtotal	\$ 13,643,209	\$ 6,302,519	\$ 7,340,690	54%
Total	\$ 23,650,172	\$ 9,613,591	\$ 14,036,581	59%



Capital Returns

- ◆ Requires fundamental knowledge of the assets that are in service:
 - Acquired assets – debt portion
 - Acquired assets – equity portion
 - Contributed assets
- ◆ Once assets have been determined greatest challenge may be splitting return into various reporting categories.



Experience of Others

Group Discussion ...

Water system users that have made the transition from cash based accounting to utility based accounting.

- Benefits from change.
- Challenges identified.
- Lessons learned.



Reporting Details



Reporting Details

- ◆ During this part of the workshop we will walk through the reporting templates.
- ◆ The objective is to orientate you to the forms and information requirements.
- ◆ The reporting templates are web based and can be used to enter and amend annual information up to an announced cut off date.



Identification of Owner

Contact Information:

Owner Name:

EMS #:

System Served:

Contact Name:

Telephone Number:

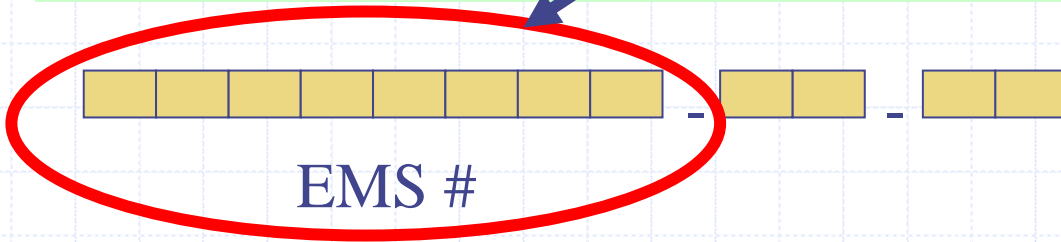
Contact Title:

Email Address:

Address:

City, Town, Village:

Postal Code:



Provided by Alberta Environment. Is the first 8 digit number of the approval # or registration # of the Water System



Service Information

Population served – As of last census.

Service Information:

Population Served:

Daily Production Capacity:

Water Source Type:

Surface Water

Surface & Ground Water

Ground Water

Treated Water From Others

Distribution System Length:

Distribution system length - Length of piping in km.

Daily production capacity is the amount of treated water that can be produced by the water system per day. (m³)



Service Cost – Cash Basis

Costs:	Operations & Mtce.	Debt Service	Non-Debt Capital
Source of Supply:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Water Treatment:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Distribution:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Customer Accounts:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Administration:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Category Total:	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Grand Total Costs:	<input type="text"/>

Entry Details as previously described. Report using only one method.

Reporting Period – the 12 month period preceding your year end, in the year of reporting. 2007 report with a March 31 year would report April 1, 2006 to March 31, 2007.



Service Cost – Utility Basis

Costs:	Operations & Mtce.	Depreciation	Return on Capital:
Source of Supply:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Water Treatment:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Distribution:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Customer Accounts:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Administration:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Category Total:	<input type="text"/>	<input type="text"/>	<input type="text"/>
		Grand Total Costs:	<input type="text"/>

Entry Details as previously described. Report using only one method.

Reporting Period – As previously described.



Water Production

Water Volumes:

Treated Water Supplied:

Cost per Supplied m3:

Treated Water Billed:

Cost per Billed m3:

Treated water supplied

Treated metered water volume after treatment as it enters the distribution system. (m3)

Treated water billed

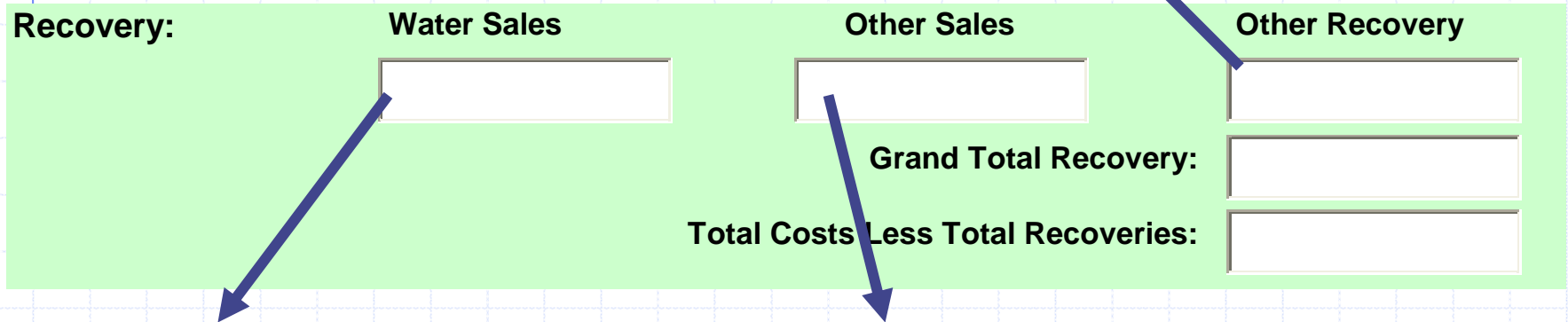
Includes customer metered water, bulk sales as well as treated water for fire protection. (m3)

Unit Costs – Total cost / water production units



Recovery

Other Recovery includes operating grants, bylaw fines, insurance recoveries etc.



Water sales includes metered & bulk water, plus rate surcharges.

Others sales includes service connection fees, fire flow charges, meter sales.

