



# Asset Management Overview

- Scope of assets
- Asset life cycle stages
- Requirements for asset management
  - Data
  - Process
  - Technology
  - o People

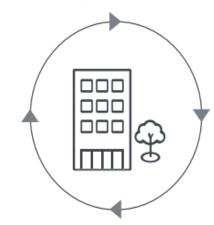
### Asset Life Cycle

### Planning Stage



#### determine asset requirements

- assessment of supply and demand, existing assets and their capabilities
- systematic analysis and review of strategic alignment
- review of long-term plans
- prioritization and development of a business case
- cost-risk-benefit analysis
- > consideration of total life cycle costs



#### Implementation Stage



#### build or acquire the asset

- pre-construction tasks, such as design and tender, procurement analysis and acquiring funding
- construction or acquisition
- project management
- post-construction tasks, such as commissioning and handing off to operations and maintenance staff and systems

### renew or dispose of asset

- ▶ replacement
- upgrading
- disposal



### Renewal or Disposal Stage

#### deliver services with the asset

- general operations
- preventative and reactive maintenance
- > routine and periodic inspections
- condition assessments
- compliance testing and monitoring
- performance measuring and reporting
- cost tracking



Operations & Maintenance Stage



# Benefits of Asset Management

- Reduce risk of asset failure (aging critical infrastructure)
- Optimize asset performance and lifespan
- Increase operational efficiency
- Increase transparency of asset health and service costs
- Improve asset data for capital decision-making and financial planning

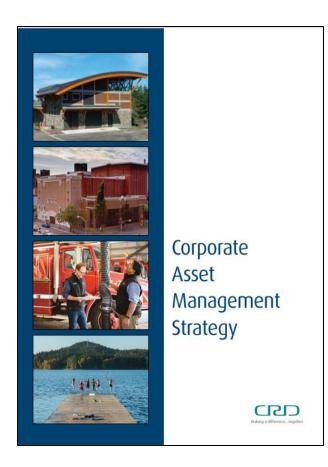




# Corporate Asset Management Strategy



POLICY Corporate Asset Management Policy



PRACTICES
Data, Process
Technology,
People

PLANS
Asset
Management
Plans by
Service





#### COMMITMENT 3:

Provide efficient, effective and innovative operations of our water system infrastructure

PRIORITY (1) Make evidence-based and community-responsive infrastructure decisions to ensure reliable system performance and sustainability.

#### **ACTIONS**

#### **Near-Term Actions**

 Continue to develop and consolidate various risk registries to prioritize expenditures based on those identified risks

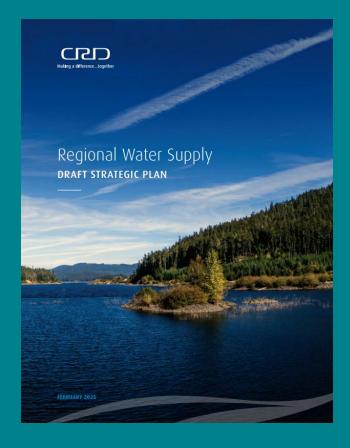
#### **Medium-Term Actions**

- Mature our asset and maintenance management processes to maximize data driven decision-making. Example Initiatives:
  - a. Define data standards and Key Performance Indicators (KPIs) related to maintenance and asset management and develop dashboards to track and identify trends.
  - b. Refine the comprehensive asset management plan to prioritize key maintenance and capital projects.
- Refine maintenance plans to optimize and extend asset life.
- Continue to develop and improve our SCADA system to inform operational decision making.

#### **Longer-Term Actions**

- Create and automate an integrated process narrative for the transmission system to optimize system performance and improve energy efficiency.
- Expand the critical spare parts program to continue to reduce system downtime or service interruptions.
- Invest in technology for decision-making support and reporting.

## Alignment with Regional Water Supply Strategic Plan





# Corporate Asset & Maintenance Management Division

## **Core Functions**

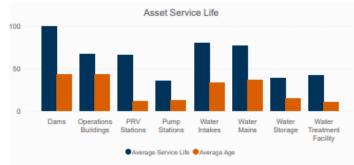
- Define asset data standards and performance measures
- Refine asset management plans
- Maintain asset records and preventative maintenance plans
- Report on asset health to inform maintenance and capital projects
- Implement asset and maintenance management software and business processes
- Manage spare parts inventory





## Where we are now

- Advancing priority actions in the Strategy
- Developing first generation asset management plans by service
- Maintaining asset data in various systems
- Aligning data and processes to industry standards
- Building future state roadmaps for asset and maintenance management



The Asset Service Life chart shows the average expected service life of each asset class in relation to the average age of the assets within the class. A weighted average is used based on replacement value.





Overall condition rating of the asset classes is based on remaining expected service life. Replacement values are shown in relation to the condition rating.

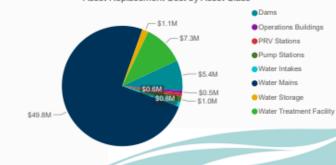
Good - Asset has more than 50% of remaining expected service life.

Fair - Asset has between 1% and 50% of remaining expected service life.

Poor - Asset has reached the end of expected service life.

Assets identified in poor condition may still be performing adequately for the service. A condition assessment is advised prior to replacement

#### Asset Replacement Cost by Asset Class





# Where we are going

- One source of truth for asset data
- Aligned processes, people, and technology
- Cost tracking at the asset level
- Real-time asset reporting
- Reliability-centered maintenance
- Risk-based replacement planning for all assets
- Consideration of natural asset management







Questions?

