

# Infrastructure Assets Management: Benefits to FN Communities

Dr. Guy Félio, P.Eng.  
Infrastructure Strategies & Research Inc.

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# Topics Covered

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- About I.S.R. Inc.
- Infrastructure Assets Management (IAM): what is it?
- Benefits and Challenges of IAM
- Linkages:
  - CAIS/ACRS
  - PSAB 3150
- Questions/Discussion



# About Infrastructure Strategies and Research Inc.

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# About I.S.R. Inc.

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- Independent consultancy
- Specializes in infrastructure strategies, management and training
- Dr. Guy Félio – Principal
  - 25+ years experience as researcher, professor, practitioner, policy advisor
  - Father of *InfraGuide*
- Wide network of partners



# Infrastructure Assets Management

**What is it?**





# *InfraGuide (2003)*

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Asset management:

The combination of **management, financial, economic, engineering, operational** and other practices applied to physical assets with the objective of providing the **required level of service** in the **most cost-effective** manner.



# The 7 questions of Asset Management





# InfraGuide

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1. What do you have and where is it?  
**(Inventory)**
2. What is it **worth**? (Costs/replacement rates)
3. What is its **condition** and expected remaining service life? (Condition and capacity analysis)
4. What is the **level of service** expectation, and what needs to be done? (Capital and operating plans)





# InfraGuide

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5. When do you **need to do it?** (Capital and operating plans)
6. How much will it **cost** and what is the **acceptable level of risk(s)**? (Short- and long-term financial plan)
7. How do you ensure **long-term affordability/sustainability**? (Short- and long-term financial plan)



# General Infrastructure Management Framework

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Based on a report to INAC-BC  
Region



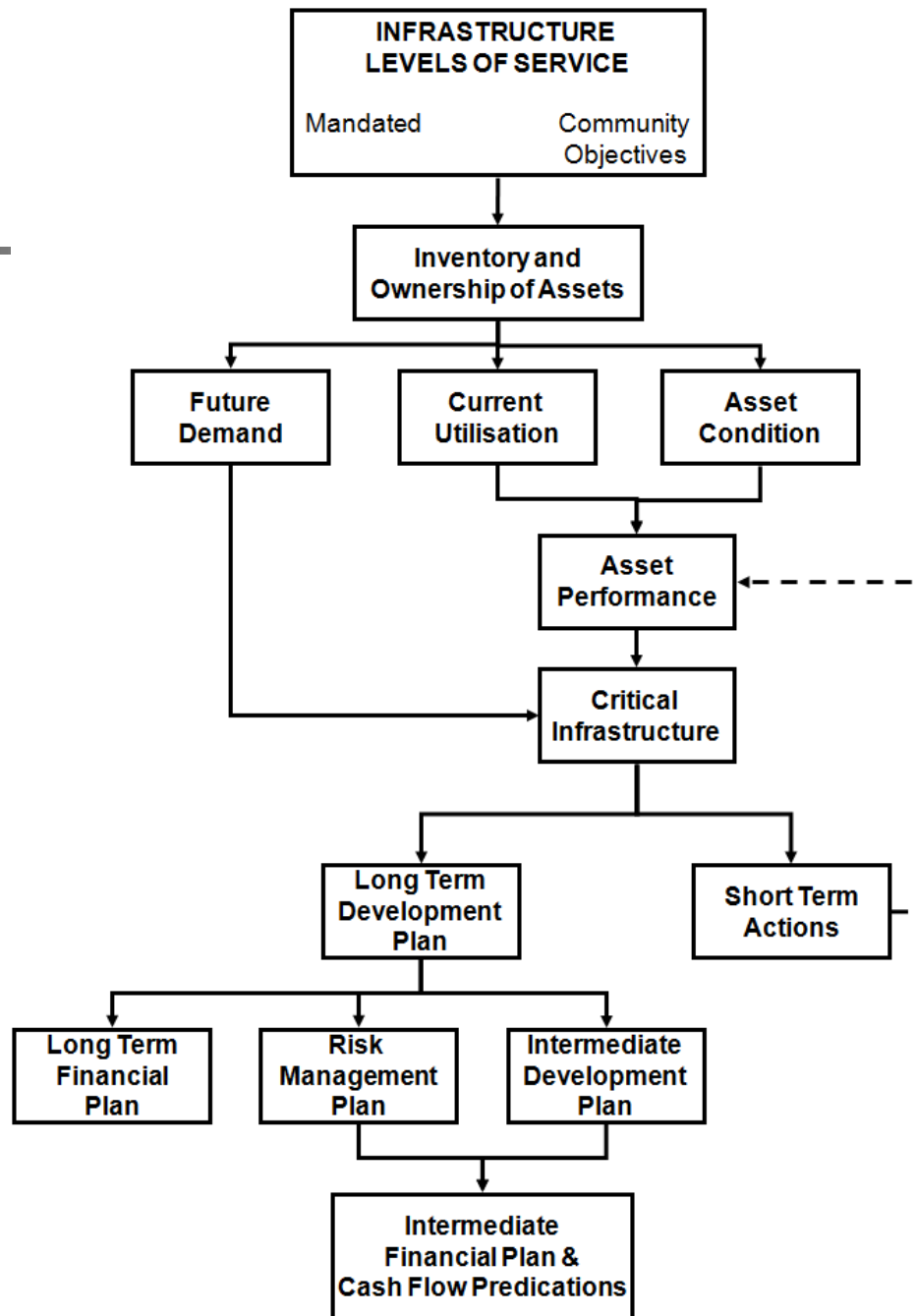
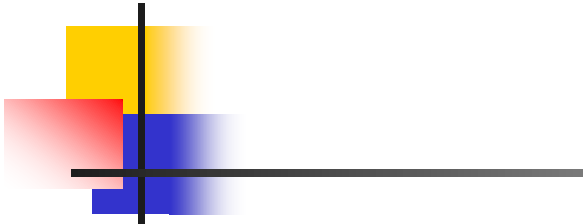


# General Framework

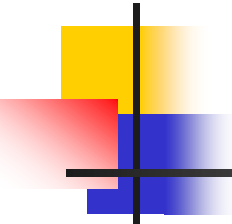
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- Considers mandated and community levels of service
- Includes consideration of future demand
- Requires identification of critical infrastructure elements
- Integrates risk management
- Provides steps for short and long term development and financial plans







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- Levels of service can relate to:
    - The Service
      - Provision of drinking water, collection and treatment of wastewater
      - Evaluation of the “system” performance
      - Considers inter-dependencies of assets/services
    - The Assets
      - Pipes, pumps, buildings, roads
      - Performance: in terms of physical, functional, health and safety, and capacity



# *InfraGuide (2002)*

Regulatory  
Framework





# Linkages to Levels of Service

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- Asset understanding
  - Information provided by AM system
  - Includes elements related to asset and service performance and associated measures, existing vs. expected levels of service, etc.



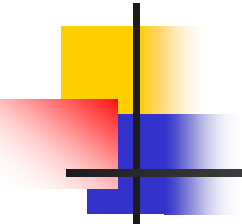


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- Consultation/Communications

- Establishes **perceptions of the acceptability** of existing levels of service and **user willingness to pay** for either a higher or lower service level.
- Includes the identification of **key stakeholders**
- **Establishes** methods of obtaining user assessments of levels of service.
  - Can include user surveys/customer satisfaction surveys and focus groups of selected stakeholders.



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- Strategic alignment
    - **Community goals** set the tone for the levels of service the **community wants and is willing/able** to support financially.
    - These goals **reflect the values of the community**, but may be directed by certain legislative/regulatory requirements.





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## ■ Risk tolerance

- Community dependent
- Needs to be understood when decisions on levels of service are taken.
- Finances or the lack of funding may require a compromise that could affect potable water systems, treatment facilities, and transportation systems, exposing the community to increased risk and certain legal liabilities.
- Community determines its level of comfort and willingness to accept that risk.



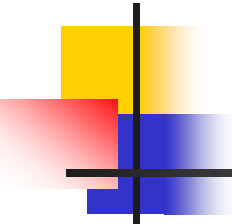


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- Financial considerations

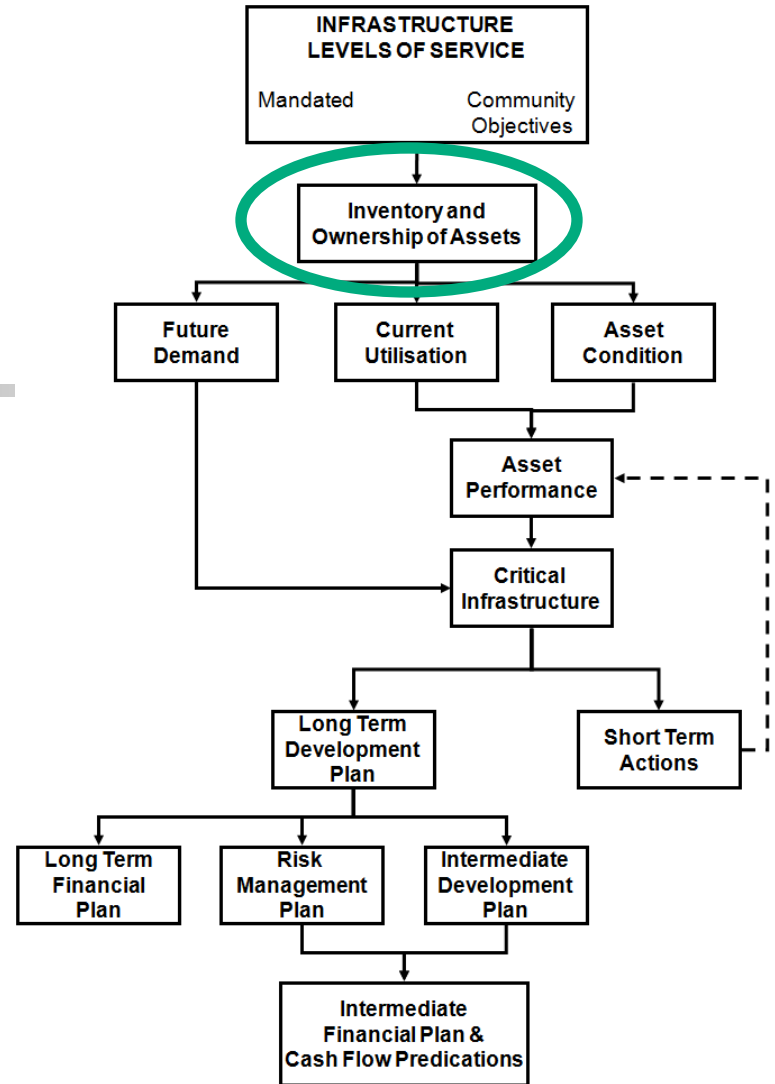
- Dictated by community/user willingness to pay except when regulated
- To deal with the financial realities, it is necessary to:
  - know the cost associated with varying levels of service;
  - understand the financial resources available to provide these levels of service;



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- assess community/user willingness to pay;
  - understand the implications of not achieving certain levels of service relative to community goals/strategic alignment; and
  - understand long-term (life cycle) cost implications of implementing specific level of service

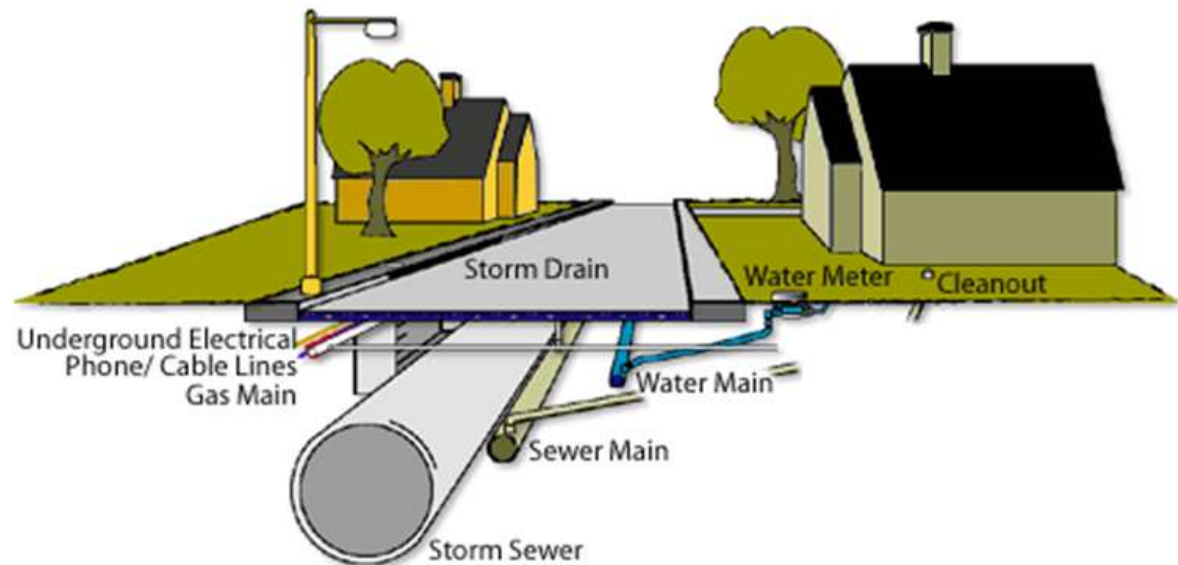


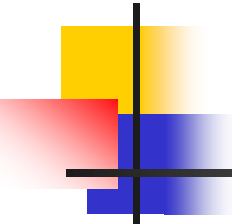
# Inventory



# Inventory

- What do we have?
- Where is it?
  - Surface
  - Subsurface



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- Estimate of the quantity of the asset group (e.g., total length of water main).
    - If the quantity is not readily available, it may be estimated by pro-rating quantities for other municipalities based on population.
  - For the operational approach, a detailed inventory is required for each component, encompassing such characteristics as pipe length, diameter, material, and year of installation.



# Inventory Tools

- Spreadsheets/Data bases (e.g., Excel, Access)
- Graphical interface: mostly GIS based

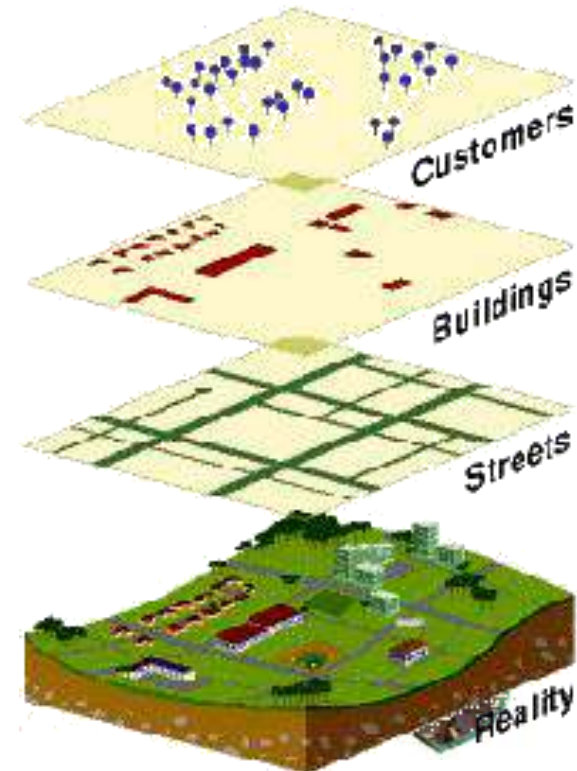
The screenshot displays a GIS application window titled "WSSC Water & Sewer Infrastructure - Netscape". The interface includes a map view on the left showing a residential area with various infrastructure features. A search panel on the right allows for "PARCEL MAILING ADDRESS AND HYDRANT QUERY" with options for "Hydrant Query" and "Address Query". Below the search panel, there are two data tables: "Property Data Report" and "Water Point Features".

**Property Data Report**

Count	Parcel Code	Mailing Address
1	131379229	1302 TIVERTON PL UPPER MARLBORO MD 20772-0000
2	131356175	1304 TIVERTON PL UPPER MARLBORO MD 20772-
3	131408574	1306 TIVERTON PL UPPER MARLBORO MD 20772-0000

**Water Point Features**

Count	Appurtenance ID	Symbol Code	Display Text	X Location	Y Location
1	FH02010020	FH	F020	1363993.25	438568.0625



# Value

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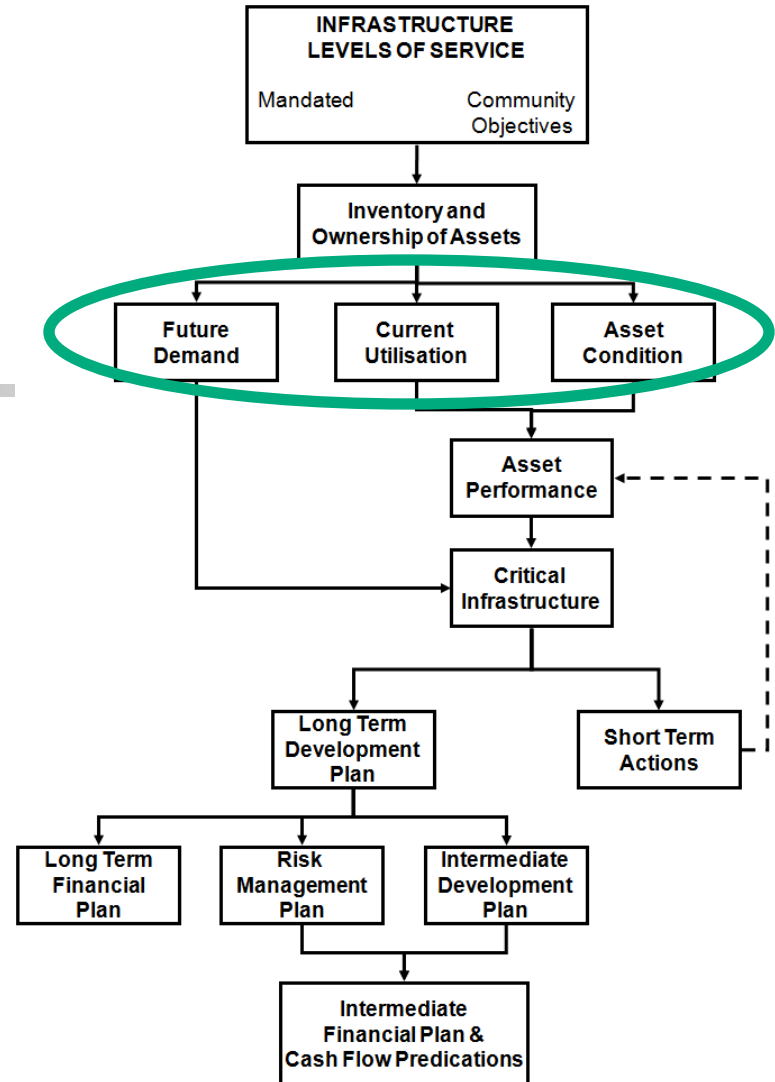
# What is it worth?

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- Asset valuation tools vary
  - Past based (Accountants)
    - Historical cost
    - Book value
  - Current based (Engineers)
    - Replacement value



# Demand and Condition





# Future demand

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- Population projections (growth, decline)
- Community initiatives (economic development, social/cultural activities, environmental conditions, e.g., climate change)
- Regulatory environment





# Current utilisation

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- Establishes the current usage of the asset, for example
  - Number of students in the school
  - Potable water produced and delivered
  - Tons of solid waste going to landfill
- May be measured in terms of daily/monthly averages, peak daily demand, etc.





# Asset Condition

- Example (Edmonton)

<i>Physical Condition</i>	Physical condition refers to the condition of the physical infrastructure that allows it to meet the intended service level.
<i>Demand/Capacity</i>	Demand/capacity represents the ability of the physical infrastructure to meet service needs.
<i>Functionality</i>	Functionality is the ability of the physical infrastructure to meet program delivery needs.

- Methods/tools vary depending on type of infrastructure
- Evaluated for each infrastructure element/group(e.g., road, storm-water)
- Remember inter-dependencies, e.g., water system condition may affect fire protection services





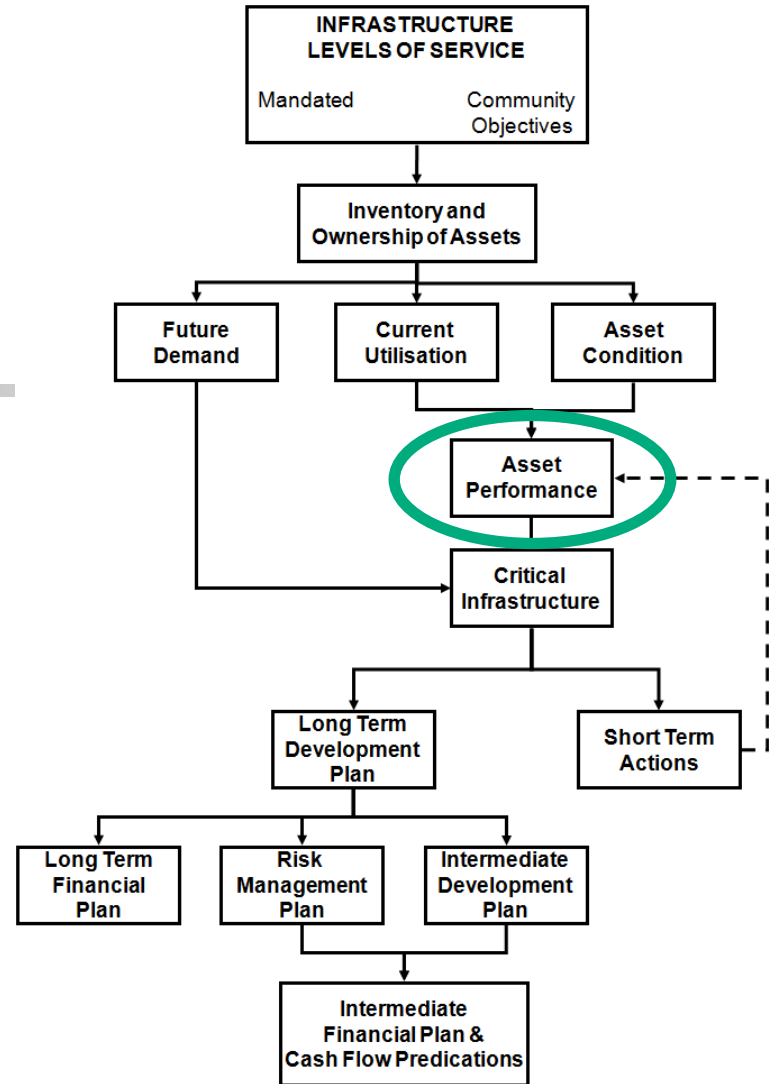
# Condition Rating

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- ACRS – General Condition Rating - 10 point system:
  - 0 denotes **CLOSED** (to the general public)
  - 1 - 3 denotes **POOR** condition
  - 4 - 6 denotes **FAIR** condition
  - 7 - 9 denotes **GOOD** condition
  - 10 denotes **NEW**



# Asset Performance





# Asset Performance

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- Performance with respect to the service being supported:
  - **Physical performance:** associated mostly with engineering (structural, hydraulic, electric, mechanical)
  - **Demand/Capacity:** with respect to design parameters
  - **Functionality:** ability to meet service delivery needs in efficient/effective manner





# Physical Condition

MARK	STATE	DESCRIPTION
<b>PHYSICAL CONDITION</b>		
Very Good	A	The element is physically sound and is performing its function as originally intended. Required maintenance costs are well within standards and norms. Typically, element is new or recently rehabilitated.
Good	B	The element is physically sound and is performing its function as originally intended. Required maintenance costs are within acceptable standards and norms but are increasing. Typically, element has been used for sometime but is within mid-stage of its expected life.
Fair	C	The element is showing signs of deterioration and is performing at a lower level than originally intended. Some components of the element are becoming physically deficient. Required maintenance costs exceed acceptable standards and norms but are increasing. Typically, element has been used for a long time and is within the later stage of its expected life.
Poor	D	The element is showing significant signs of deterioration and is performing to a much lower level than originally intended. A major portion of the element is physically deficient. Required maintenance costs significantly exceed acceptable standards and norms. Typically, element is approaching the end of its expected life.
Critical	F	The element is physically unsound and/or not performing as originally intended. Element has higher probability of failure or failure is imminent. Maintenance costs are unacceptable and rehabilitation is not cost effective. Replacement/major refurbishment is required.



# Demand / Capacity

## DEMAND/CAPACITY

Very Good	A	Demand corresponds well with design capacity and no operational problems experienced.
Good	B	Demand is within design capacity and occasional operational problems experienced.
Fair	C	Demand is approaching design capacity and/or operational problems occur frequently.
Poor	D	Demand exceeds design capacity and/or significant operational problems are evident.
Critical	F	Demand exceeds design capacity and/or operational problems are serious and ongoing.



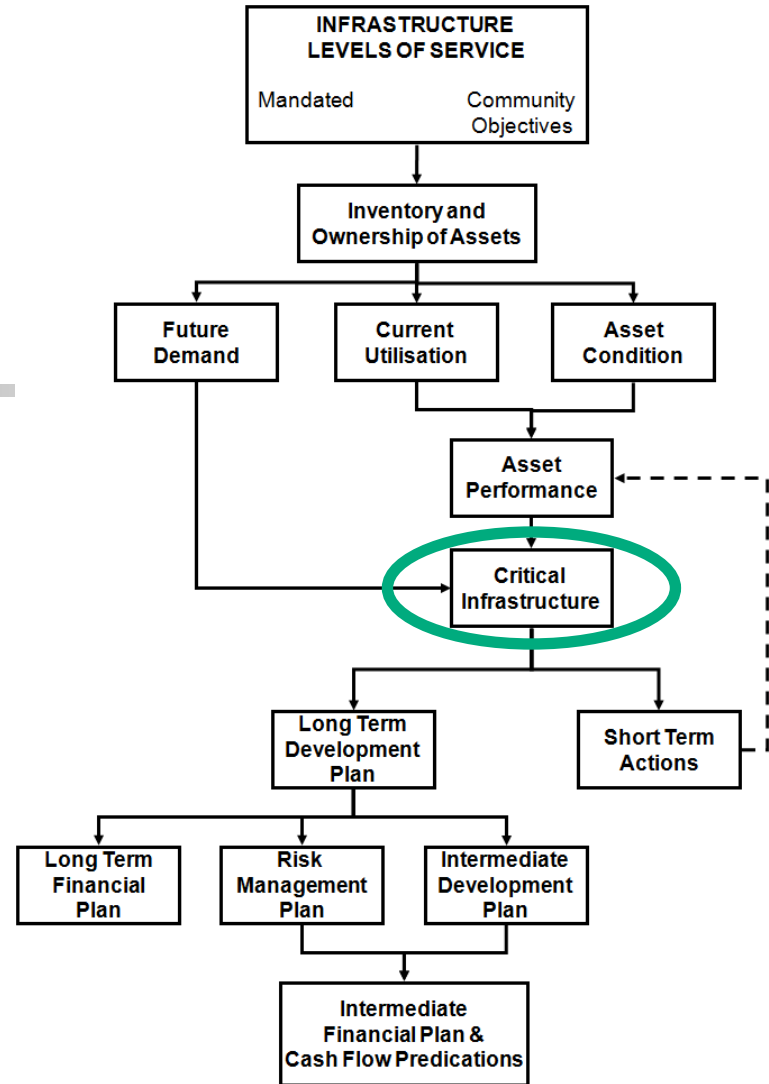


# Functionality

FUNCTIONALITY		
Very Good	<b>A</b>	The element meets all program/service delivery needs in a fully efficient and effective manner.
Good	<b>B</b>	The element meets program/service delivery needs in an acceptable manner.
Fair	<b>C</b>	The element meets most program/service delivery needs and some inefficiencies and ineffectiveness present.
Poor	<b>D</b>	The element has a limited ability to meet program/service delivery needs.
Critical	<b>F</b>	The element is critically deficient and does not meet program/service delivery and is neither efficient nor effective.



# Critical Infrastructure



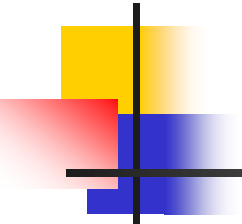


# Definition

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- Consists of those **physical and information technology facilities, networks, services and assets** which, if disrupted or destroyed, would have a **serious impact on the health, safety, security or economic** well-being of the community or the region. (Adapted from *Public Safety Canada*)
- Allows to prioritise if limited resources are available



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- 
- Consider:
    - Identify the critical assets/services and related components (physical, human)
    - Inter-dependencies: asset becomes critical if it supports another essential service
    - Focus on health and safety
  - Establish vulnerability and risks
    - Likelihood of failure to occur
    - Consequences of failure



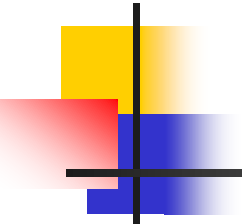


# Categories of risks

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- Naturally occurring
  - Fire, storms, floods, etc..
  - Unknown and uncontrollable, statistical prediction of occurrence and severity
- External impacts
  - As a result of consequences from third party failure
- External aggression
- Physical deterioration and/or failure
- Operational risks





## Risk Analysis Matrix

<b>Impact of the Risk</b>	High				
	Medium				
	Low				
		Not Likely	Unlikely	Likely	Highly Likely
		<b>Likelihood of the Risk Event Occurring</b>			





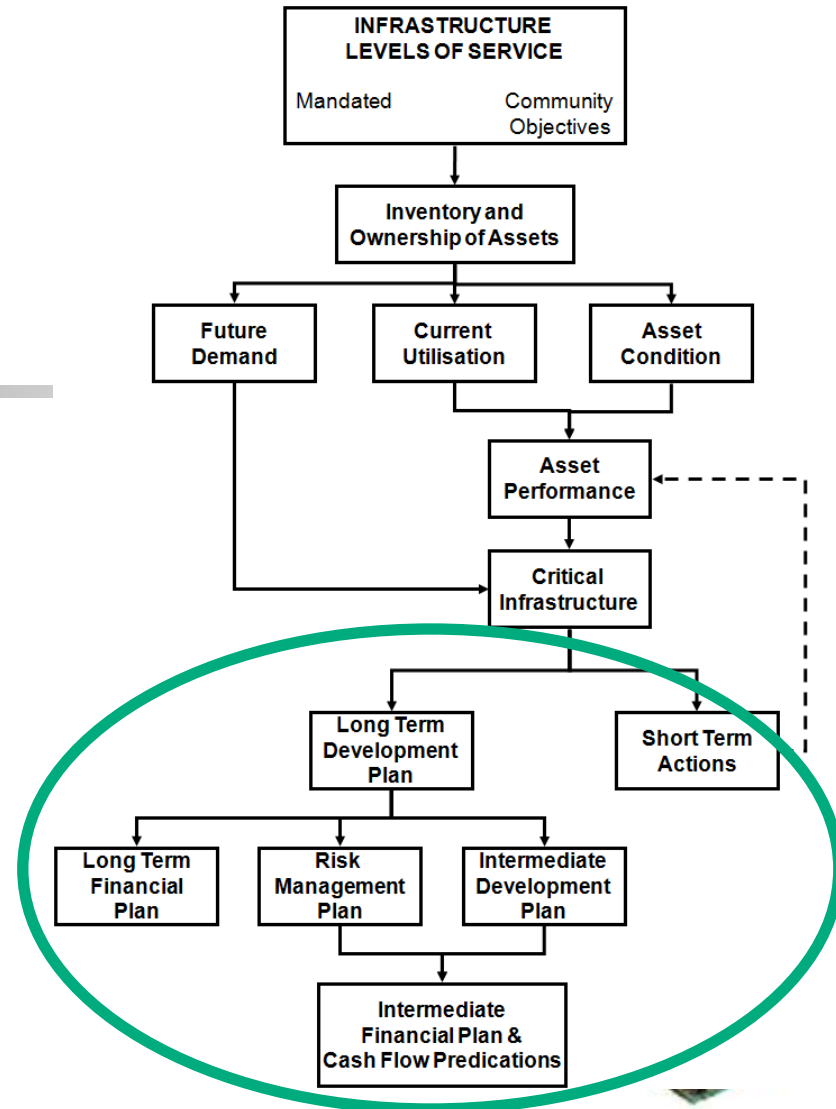
# Simple Risk Analysis

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- **Low** = Risks that require no or minimal actions. Minimal actions could include public education/awareness.
- **Medium** = Some actions or controls will be required to reduce risks to low or negligible levels.
- **High** = These risks will require high-priority actions to reduce risks to low or negligible level.



# Planning



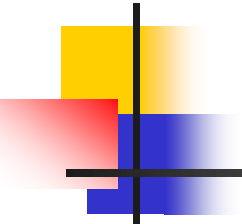


# Planning

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- WHEN do you need to do it?
  - Capital and operating plans
  - Priorities
    - Elements that affect choices:
      - How critical is the infrastructure (if it were to fail, what are the impacts?)
      - Uncertainty about residual life
      - Influence by other works (sewer under road may need replacement – road rehab may be concurrent)
      - Resources



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- Short term actions:
    - Needed to remedy critical situations or those requiring immediate attention
    - Lead to improvement of the performance of the infrastructure asset



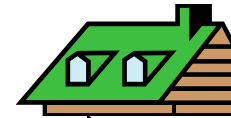
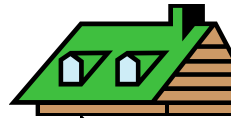
# Why Asset Management?





**House Expected Life = 50 years**

## Roof

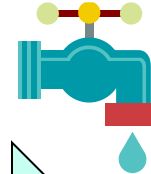
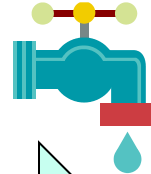
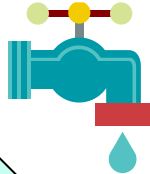


**20 years**

**+20 years**

**+20 years ??**

## Plumbing



**14 years**

**+ 14 years**

**+ 14 years**

**+ 14 years ??**

## Windows



**30 years**

**30 years ??**



# Why Asset management <sup>1</sup>

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- Leads to more effective communication with ratepayers, elected officials, financial rating organizations, and regulatory agencies:
  - allows for more accurate financial planning;
  - leads to more efficient data management; and
  - results in positive institutional change.





# Why Asset management <sup>2</sup>

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- Helps in avoiding problems and potential crises; reduces risk to the community;
- Provides better and consistent levels of service to the public, at less cost; improves service and performance
- Reduces life cycle costs and expenditures;





# Why Asset management <sup>3</sup>

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- Allows for better decisions regarding resource allocation;
- Ensures that assets are managed to deliver the Community's strategic outcomes;
- Ensures the reliable operation and continued sustainability of the asset;





# Warnings

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# WARNINGS 1



- AM process NOT to be driven by technology
- ONE size does NOT fit all:
  - “Back of the envelope” may be acceptable as a first step
- AM has to become a CULTURE within organisation
  - People
  - Senior management/decision-makers leadership





# WARNINGS <sup>2</sup>

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- AM is not a one-time-deal: continuous (improvement) process
- AM must feed the decision-making process – support, NOT replace
- AM should have actionable outputs ... not just a report





# Do's and Don'ts <sup>1</sup>

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- Start it
  - Use any existing data, information, knowledge you have
    - If doing PSAB reporting, work with Finance and Accounting
  - Set-up a solid framework – fill the data gaps as you go
  - Get the whole organisation involved – this is not only an engineering exercise
  - Find a champion





# Do's and Don'ts <sup>2</sup>

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- Don't get stuck
  - Technology is a small part of the process
  - Data will come – don't wait until you have 100% knowledge of 100% of assets
  - Use intuition, common sense, collective knowledge, judgement to fill gaps – plan for more accurate measures in the future
  - Call on peers and experts for help



# PSAB 3150 vs. Asset Management:

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Friends or Foes?



# PSAB 3150

# Asset Management

- Inventory
- Condition Assessment
- Residual life prediction
- Valuation (historical)

- Inventory
- Condition Assessment
- Residual life prediction
- Valuation (replacement)



# PSAB 3150

# Asset Management

- Financial reporting

- Intervention plans
- Planning
  - Engineering
  - Development and Community
  - Financing
- Priorities



# PSAB 3150 – Asset Management:

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Friends ~~or Foes?~~



# CAIS/ACRS: support to developing IAM plans

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More data???



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	A	B	C	D	E	F	G	H
	Asset Name	Category Code	Category Description	Class Code	Class Description	Sub-Class Code	Sub-Class Description	Asset Code
1	Community Septic Tank	B	UTILITY	B2	WASTE COLLECTION AND DISPOSAL	B2F	CTTY SEPTIC TANK AND FIELD	B2F
2	FORMER BAND OFFICE	A	BUILDINGS	A4	RESIDENTIAL	A4A	SINGLE FAMILY HOUSE	A4A
3	PRIVATE ACCESS GRAVEL ROAD	D	TRANSPORTATION	D7	OTHER ROADS	D7B	PRIVATE ACCESS ROADS	D7B
4	Blueberry Band School	A	BUILDINGS	A3	INSTITUTIONAL	A3A	SCHOOL	A3A
5	BAND HALL	A	BUILDINGS	A6	RECREATIONAL	A6Z	OTHER	A6Z
6	Water Main	B	UTILITY	B1	WATER SUPPLY	B1B	WATER MAINS	B1B
7	Gravel Road	D	TRANSPORTATION	D1	ROAD	D1B	GRAVEL ROADS	D1B
8	AERATED LAGOON	B	UTILITY	B2	WASTE COLLECTION AND DISPOSAL	B2I	AERATED LAGOON	B2I
9	Earth Road	D	TRANSPORTATION	D1	ROAD	D1A	EARTH ROADS	D1A
10	Sanitary Mains	B	UTILITY	B2	WASTE COLLECTION AND DISPOSAL	B2A	SANITARY MAIN	B2A
11	Gravel Road	D	TRANSPORTATION	D1	ROAD	D1B	GRAVEL ROADS	D1B
12	Water System Mains	B	UTILITY	B1	WATER SUPPLY	B1B	WATER MAINS	B1B
13	UNLISTED PORTABLE PUMP TRAILER	E	VEHICLES	E1	FIRE	E1Z	OTHER	E1Z
14	Water System Mains	B	UTILITY	B1	WATER SUPPLY	B1B	WATER MAINS	B1B
15	UNMOD GARBAGE TRUCK	E	VEHICLES	E2	SOLID WASTE	E2B	UNMODIFIED VEHICLE	E2B
16	Community Well No. 2	B	UTILITY	B1	WATER SUPPLY	B1F	COMMUNITY WELLS	B1F
17	Fire Hall	A	BUILDINGS	A3	INSTITUTIONAL	A3H	FIRE STATION	A3H
18	Sanitary Mains	B	UTILITY	B2	WASTE COLLECTION AND DISPOSAL	B2A	SANITARY MAIN	B2A
19	PRIVATE ACCESS ROAD	D	TRANSPORTATION	D7	OTHER ROADS	D7B	PRIVATE ACCESS ROADS	D7B
20	PRIVATE ACCESS ROAD	D	TRANSPORTATION	D7	OTHER ROADS	D7B	PRIVATE ACCESS ROADS	D7B
21	COMMUNITY SEPTIC TANK	B	UTILITY	B2	WASTE COLLECTION AND DISPOSAL	B2Z	OTHER	B2Z
22	OLD PUMPHOUSE	A	BUILDINGS	A5	UTILITY	A5Z	OTHER	A5Z



Microsoft Excel ribbon showing tabs: Home, Insert, Page Layout, Formulas, Data, Review, View. The ribbon includes various toolbars for font, alignment, and styles. The active cell is A53, and the sheet name is Water Treatment Building.

	A	B	C	D	E	F	G	H	I
	Asset Name	Deficiency #	Description	Year Identified	Year Completed	Category Type	Urgency Type	Project Type	Estimated Cost
1	Storage Shed	1	REPR/REPAINT EXTERIOR	1996	2003	Major Repairs	Current Fiscal Year + 2 years	Restore Utility	\$ 1,000.00
2	Storage Shed	2	REPL DAMAGED HEADR JOIST	1996	2003	Major Repairs	Current Fiscal Year + 2 years	Restore Utility	\$ 500.00
3	Storage Shed	3	PROVIDE NEW FOUNDATION	1996	2003	Component Replacement	Current Fiscal Year + 2 years	Restore Utility	\$ 2,500.00
4	Storage Shed	4	STUDY REPLACEMENT V RENO	2006		Asset Replacement	Current Fiscal Year + 1 year	Restore Utility	\$ 3,000.00
5	Storage Shed	5	MAP UNDERGROUND ELECTRIC	2006		Study	Current Fiscal Year + 1 year	Operational	\$ 2,000.00
6	Storage Shed	6	REPLACE WOOD STOVE & CHI	2006		Component Replacement	Immediate	Health and Safety	\$ 2,000.00
7	Former Workshop	1	REPL ROOF SHINGLES	1991	2003	Major Repairs	Current Fiscal Year + 1 year	Restore Utility	\$ 2,500.00
8	Former Workshop	3	CMPLT INT RENOVATIONS	1991	2003	Asset Upgrade	Immediate	Restore Utility	\$ 5,000.00
9	Former Workshop	5	LEVEL BUILDING	1996	2003	Asset Upgrade	Current Fiscal Year + 1 year	Arrest Deterioration	\$ 2,500.00
10	Former Workshop	6	REPLACE EXT SIDING	1996	2003	Major Repairs	Current Fiscal Year + 1 year	Restore Utility	\$ 2,000.00
11	Former Workshop	7	REPL WINDOWS	1996	2003	Major Repairs	Current Fiscal Year + 1 year	Restore Utility	\$ 1,000.00
12	Former Workshop	8	INST TURBINE ROOF VENT	1996	2003	Asset Upgrade	Current Fiscal Year + 1 year	Arrest Deterioration	\$ 200.00
13	Former Workshop	9	INSULATE CEILING	1996	2003	Asset Upgrade	Current Fiscal Year + 1 year	Operational	\$ 1,000.00
14	Former Workshop	10	REPL FLOOR SHEATHING	1996	2003	Major Repairs	Current Fiscal Year + 1 year	Restore Utility	\$ 1,500.00
15	Former Workshop	11	INSULATE WALL & GYROCK	1996	2003	Asset Upgrade	Current Fiscal Year + 1 year	Operational	\$ 1,000.00
16	Former Workshop	13	UPGRADE ELECTRICAL SYST	1996	2003	Asset Upgrade	Current Fiscal Year + 1 year	Conform to Code	\$ 2,500.00
17	Former Garage	1	REPLACE BUILDING	1991		Asset Replacement	Immediate	Conform to Code	\$ 25,000.00
18	Gymnasium	1	A Padded Mat w/a Minimum	2006	2004	Minor Repairs	Immediate	Health and Safety	\$ 1,500.00
19	Gymnasium	2	Provide Handrail inside	2006	2004	Minor Repairs	Immediate	Health and Safety	\$ 1,000.00
20	Band Hall	7	REPAIR CEILING	1992	2003	Major Repairs	Current Fiscal Year + 1 year	Restore Utility	\$ 1,200.00
21	Band Hall	8	FENCE PROPANE TANKS	1992	2003	Asset Upgrade	Immediate	Health and Safety	\$ 1,500.00
22	Band Hall	10	INSTLL RANGE HOOD & FAN	1992	2003	Asset Upgrade	Current Fiscal Year + 1 year	Operational	\$ 400.00
23	Band Hall	14	RFNSH INTER OF ELDRS RMS	1992	2003	Minor Repairs	Current Fiscal Year + 1 year	Operational	\$ 1,000.00
24	Band Hall	15	REPL WINDOWS	1996	2003	Asset Upgrade	Current Fiscal Year + 1 year	Restore Utility	\$ 7,000.00
25	Band Hall	22	PROVIDE HANDICAP RAMP &	2000	2003	Asset Upgrade	Immediate	Conform to Code	\$ 10,000.00
26	Band Hall	23	PAINT EXTERIOR	2000	2003	Major Repairs	Current Fiscal Year + 1 year	Arrest Deterioration	\$ 3,500.00
27	Band Hall	24	REPAIR ROOF LEAKS&INSTAL	2000	2003	Major Repairs	Current Fiscal Year + 1 year	Arrest Deterioration	\$ 10,000.00
28	Band Hall	25	INSTALL EAVESTROUGH&DOWN	2000	2003	Asset Upgrade	Current Fiscal Year + 1 year	Operational	\$ 1,000.00
29	Band Hall	26	PAINT INTERIOR WALLS	2000	2003	Major Repairs	Current Fiscal Year + 1 year	Arrest Deterioration	\$ 1,000.00



Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

Calibri 11

General

Conditional Formatting Format as Table Cell Styles

Insert Delete Format

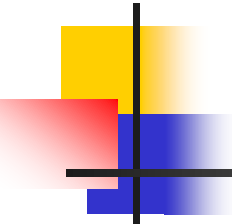
Sort & Find & Filter Select

	A	B	C	D	E	F	G	H	I	J
1	Asset Name	Quantity Description	Design Life	Year Constructed	Quantity Number	ARV	Estimated Remaining Life	GCR Code	GCR Description	
2	Aerated Lagoon	EA.	75	1989	1	\$763,912	0	7	Good	
3	Band Office	SQ.M.	15	1987	340	\$770,630	4	3	Poor	
4	Clinic	SQ.M.	0	1990	56	\$0	0	9	Good	
5	Comm Septic Tank for Comm Hall	EA.	100	2004	2	\$53,960	0	9	Good	
6	Community Septic Tank	EA.	100	1990	1	\$26,980	40	8	Good	
7	Dirt road	KM.	0	1993	1.1	\$0	0	99	Not Inspected	
8	Earth Road	KM.	100	1989	0.25	\$20,673	5	5	Fair	
9	Fire Hall	SQ.M.	50	1995	114	\$332,466	29	8	Good	
10	Former Band Office	SQ.M.	0	1970	114	\$0	0	7	Good	
11	Former community hall	SQ.M.	0	1960	69	\$0	0	7	Good	
12	Garbage truck	EA.	0	1900	1	\$37,367	0	99	Not Inspected	
13	Gravel Road	KM.	100	1984	0.1	\$24,917	20	5	Fair	
14	Gravel Road	KM.	100	1970	2.3	\$573,093	25	8	Good	
15	Gravel Road	KM.	100	1993	0.15	\$37,376	20	6	Fair	
16	Gravel Road	KM.	100	1991	1.12	\$279,072	20	5	Fair	
17	Gravel Road	KM.	100	1992	0.28	\$69,768	25	6	Fair	
18	Gravel Road	KM.	100	2004	0.07	\$17,442	30	5	Fair	
19	Gymnasium	SQ.M.	50	2002	705.1	\$0	36	9	Good	
20	Old pumphouse	SQ.M.	0	0	7	\$0	0	99	Not Inspected	
21	Outdoor hockey rink	EA.	0	1960	1	\$0	0	99	Not Inspected	
22	Portable Pump trailer	EA.	0	1986	1	\$0	0	2	Poor	
23	Private Access gravel road	KM.	0	1991	0.55	\$0	0	6	Fair	
24	Private Access gravel road	KM.	0	0	1.1	\$0	0	5	Fair	
25	Private Access gravel road	KM.	0	0	1.5	\$0	0	7	Good	
26	Sanitary Main	M.	100	2004	87	\$19,446	40	8	Good	
27	Sanitary Main for Comm. Hall	M.	100	2004	100	\$22,352	40	8	Good	
28	Sanitary Mains	M.	100	1993	76	\$16,988	35	7	Good	
29	Sanitary Mains	M.	100	1985	2725	\$609,096	30	6	Fair	
30	School	SQ.M.	30	1994	874	\$2,833,016	13	8	Good	

# BC First Nations AM training

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- ISR Inc. contracted to develop content and deliver 2-day workshops in Vancouver and Tofino in February 2009
  - INAC responsible for call-out and registrations
  - Emphasis on:
    - Water and wastewater
    - Community Buildings
    - Gravel roads and culverts





# Agenda

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- Lectures and working sessions (see copy of Tofino agenda)
- Designed for interactions and problem solving
- Attended by approximately 15 participants at each location
  - Councillors
  - Housing coordinators
  - Public works and engineering
  - INAC staff





# Feedback

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- Overall extremely positive
- In general 50% of the participants rated the overall workshops as very favourable and 45% as favourable.



*In what ways was this workshop most valuable to you?*

- Good visuals. Made it relevant to our communities.
- Longevity of community buildings and assets.
- Able to take this information and better understand our community facilities.
- This workshop will enable me to better compile the assets (services) facts and make recommendations that are easily translated to policy makers.
- The roads progress and water presentation.
- Overview of general asset management and details for reference in binder.
- Learning the value of asset management.
- Collective knowledge, shared experiences. Meeting others to discuss problems and solutions. Explanations of problems and procedures.
- 2 days to meet with First Nations.
- In organizing my thoughts around planning for the future.
- Opportunity to hear what other FNs are doing. What are their challenges and how they are dealing with them?



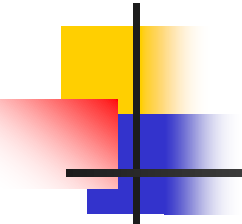


# Areas of improvement

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- Need to provide case studies from FN communities as an area as a key improvement of the workshop.
- Better linkages between the workshop and asset management in general to INAC funding, particularly on the O&M side.
- An additional day, providing more time for the participants to interact and work on their own plans. Would allow better time management.



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- Other suggested improvements
    - Better linkages between the workshop and asset management in general to INAC funding, particularly on the O&M side.
    - An additional day, providing more time for the participants to interact and work on their own plans.
    - Better time management.





# Next Steps in BC

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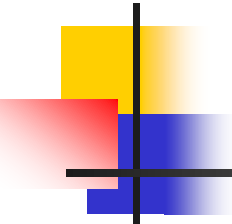
- Under discussion:
  - Two additional (3-day) workshops
  - Pilot studies
    - Four Communities
  - Development of a tool to link ACRS to PSAB 3150 reporting



# Options of Ontario FN training: discussions

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- Ongoing discussions with OFNTSC
  - Propose 3-day workshops
  - Content = INAC BC training content +
    - Additional emphasis on PSAB 3150
  - Additional time for interactions and working on the community's IAM plan
  - Maximum of 20 participants per workshop for good interactions





# Questions?

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