



Asset Management Newsletter

SECOND EDITION – WINTER 2011 ISSUE



Feature Article: Bridging the Abyss - The Infrastructure Funding Gap

By Therese Mickelson with permission from the Local Government Management Association of BC

For some, it seems like an abyss. For others, it's a nasty deep canyon. But for most local governments across BC, the gap between reserves and the cost to replace core infrastructure is intimidating. It started with extensive infrastructure construction in response to phenomenal growth in the 1940s – 1960s. Thanks to the long lifecycle, it didn't appear on the radar as a concern so there were very few measures in place to build reserves for its eventual replacement. Now, the bulk of that infrastructure is aging, with increasing maintenance needs and a growing risk of failure within the next few decades. But the money isn't in place to replace it, and for many, even the maintenance requirements are not being met.

Bridging that gap is a monumental challenge, but a group of experts has come together to share their knowledge and develop a framework to start the process. They call themselves British Columbia's Local Government Asset Management Working Group and they have made it their mission to provide leadership and support for the management of community infrastructure assets. They are focused on developing viable solutions to what has become a very tricky problem for communities in BC, across Canada and around the world. And they are providing tools to assist local governments as they tackle the many challenges related to the infrastructure funding gap.

The scope of the problem is a tremendous challenge.

A report developed by the Federation of Canadian Municipalities, notes that the majority of the infrastructure built between 1950 and 1970 is due for replacement. The condition of the infrastructure is deteriorating and the cost of maintaining it is increasing. The report estimates that the infrastructure deficit increased from \$12 billion (1985) to \$123 billion (2007) within Canada, and those numbers keep rising. The funding gap keeps growing, so prompt action is needed to determine the need and identify funding solutions.

For individual communities, the first step was to figure out the value of their assets, as most didn't have a complete inventory. This involved more than just determining the historic value – it also included developing formulas to calculate the cost for replacement and determining the timing of when the funding is needed.

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The Infrastructure Funding Gap

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“You need to understand what you own, and complete a full inventory of all the capital assets,” says Wally Wells, a Professional Engineer who shared his expertise on the National Asset Management Working Group, and is now the coordinator for the BC Local Government Asset Management Working Group. “Most local governments in BC have completed the inventory, but some have suggested to me that this means their job is over. I say no – it’s just the start. You have to take the historical value and translate it to replacement value, because that’s what we need for the future. And you need this statement of needs before you can approach any other government for help.”

Getting City employees out of their silos to work together on solutions is another challenge.

Engineering and operations professionals have been talking about the funding gap for years – both for maintenance and replacement. The recreation teams have flagged that facilities are aging and demand for new facilities continues to grow. The Finance managers came on board with the introduction of PSAB 3150 – new Public Sector Accounting Board requirements to present information about the complete stock of a local government’s capital tangible assets in their financial statements. This brought a lot of new people, with new expertise to the table to review the challenges and discuss solutions.

The BC Local Government Asset Management Working Group brought together representatives from a variety of disciplines – operations, finance and administrators – to work on a framework for solutions.

“We all worked in silos for years. There are differences in the ways we approach things for our own reasons,” says Wells. “We got everyone understanding the needs, and got away from defending our disciplines to focus on what each of us needs, and that includes bringing in chief administrative officers as they key link with Council.”

This same multi-disciplinary approach has contributed to successful progress in this area at a local level. In Prince George, they started by creating a new position to coordinate the process – an Asset Manager – and began in the public works area by integrating groups that were operating in silos within the department. They made the decision to focus on their most expensive infrastructure first, and then pulled representatives from each of those core areas: roads, water, sanitary and storm sewer networks.

When they had that inventory completed and some systems in place to determine their funding and lifecycle impacts, they extended the inventory to the remaining capital assets, and started working with the other operating groups.

“I think for me, what’s at the bottom of it all is simply a willingness to work together,” says Frank Blues, Asset Manager for the City of Prince George. “We can structure things the way we want, but at the end of the day if we’re all willing to chip in and help each other, that to me is very helpful in getting everyone’s needs met and being supported by the others.”

Building awareness of this challenge with Council and in the community is also critical. The PSAB 3150 requirements have helped to bring this funding gap challenge to the forefront as these aging assets – and the lack of funding – must now be reported from a financial perspective.

It puts the information in front of Council and the community in a new way.

Mindy Smith, Director of Corporate Services in Port Coquitlam, has been instrumental in introducing tools and providing assistance to local governments as they began the process of tracking and recording their tangible capital assets for financial reporting purposes. She was recognized for her contributions with the *Outstanding Performance & Achievement* award from the Government Finance Officers Association (GFOA) in 2009.

“You can’t address something that’s not measured, so now we know and the public knows what the costs are,” says Smith. “The communities that highlight it and bring it forward will have a better chance of gaining public support. It shows that we are living off what our parents, and their parents built and we’re taking away from what our children will have if we don’t provide for them in future.”

Bridging the gap involves having the systems and the funding available when it’s time to replace infrastructure.

When you understand the lifecycle of infrastructure, you can estimate when it will need to be replaced. But understanding the lifecycle means grasping the true costs and benefits of maintenance along with the estimated costs for replacement. Providing regular and timely maintenance is one of the best ways to extend the life of infrastructure, which also takes some of the pressure off of replacement costs because there is more time to accrue the necessary reserves. But many municipalities have seen continuous reductions in these budgets.

“You need to understand what you’re spending on maintenance, and the difference between maintenance and operation cost, because if we could improve maintenance we’d extend the lifecycle and reduce the depreciation on the books,” says Wells. “I’ve spoken to municipalities that are currently spending \$10 million on maintenance, but they say that they probably should be spending \$20 million. You can pay now. Or you can pay later – and it will be four times as much.”

It is also important to start setting aside funding as soon as possible as it will only get more difficult as the time for replacement approaches. In Port Coquitlam, they have added 1% to tax levy and utility levy to start funding a reserve to put money aside to replace future infrastructure.

“It’s not going to be enough, but it’s a start,” says Smith. “We’re trying to provide for the future but not make it too onerous to current taxpayers. So this is our first step in that direction. And we are also working with UBCM and FCM to put pressure on other levels of government to get other sources of revenue through a percentage of other taxes.”

It also helps to put systems in place to manage and track the inventory. In Prince George, they have taken their inventory and ongoing management to a new level with the implementation of a software program to model infrastructure deterioration and renewal over time. This will help identify the City’s long-term funding requirements for the renewal and/or replacement of the City’s core infrastructure including its roads, water, sanitary and storm sewer networks.

Failure is not an option. Infrastructure in communities cannot be allowed to deteriorate and fail. It must be replaced.

The infrastructure funding gap is not just a local issue – it’s a national concern. So developing solutions at the local level are an important part of moving towards solution of the nationwide issue. Organizations like the BC Local Government Asset Management Working Group are providing support to municipalities to implement workable processes. These processes will help ensure that appropriate levels of maintenance and replacement funding are in place for all new infrastructure projects based on realistic lifecycle estimates.

At the same time, they are working with organizations like UBCM and FCM to lobby provincial and federal governments to provide funding mechanisms to address the historic gaps.

For more information, visit www.assetmanagementbc.ca, and for some best practices in asset management, see Tips and Tactics on page 10.

Infrastructure Canada Contributes to a Competitive Economy, a Cleaner Environment and Liveable Communities

By Infrastructure Canada

Infrastructure Canada has an impact on the lives of Canadians throughout their day. We provide federal funds to help improve public infrastructure from coast to coast. These funds ensure that communities can provide Canadians with safe water to drink, roads to drive on, public transportation systems, museums, galleries, arenas, parks, trails and other public facilities.

We work with provinces, territories, municipalities, the private sector and not-for-profit organizations to make significant funds available every year through our suite of programs, refer to our website for more detail.

[http://www.infc.gc.ca/department/about-
apropos/about-
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apropos/about-
apropos-eng.html)

For example, through the Gas Tax Fund, INFC provides \$2 billion per year to cities from coast to coast to spend on local priorities.

This program is part of the Building Canada Plan, which includes nearly \$7 billion for larger, strategic projects of regional significance through the Major Infrastructure Component. The Building Canada Fund also includes the Communities Component, which provides \$1 billion for infrastructure projects in communities with a population of less than 100,000 people.

Infrastructure Canada has played a major role in responding to the recent global economic recession. By making funds available for infrastructure projects across the country, INFC and its partners in the provinces, territories and municipalities have injected timely and targeted funds into the economy when this was needed. For example, through the Infrastructure Stimulus Fund, the Department and its partners have invested over \$10 billion in public infrastructure; a Top-Up to the Building Canada Fund Communities Component which generated almost \$1.5 billion in additional infrastructure investments in smaller cities.

Together with our partners, we’re making a difference in communities across the country, including right here in British Columbia.

Federal funding provided by Infrastructure Canada has made it possible for communities across BC to build, rehabilitate and maintain much needed infrastructure across the province. For example, Memorial Hall in Harrison Hot Springs had deteriorated considerably and recently required a major overhaul. Renovations are now complete thanks in part to a \$200,000 contribution from the Infrastructure Stimulus Fund. As a result, the community is better positioned to sustain its long-standing role as a tourist destination of choice.



Memorial Hall, Harrison Hot Springs, BC

The Infrastructure Stimulus Fund provided an additional \$237,500 investment to help extend Lansdowne Road in Richmond. This project has made it easier for people to use the Canada Line as a direct link to Vancouver and the rest of the lower mainland and included the addition of high-efficiency lighting, geothermal sidewalk warmers to reduce annual maintenance costs and bike lanes to increase safety for cyclists.



Lansdowne Road Extension, Richmond, BC

Infrastructure Canada is investing in these projects and thousands of others like them with our partners across the country. By making these funds available, the Department is helping to keep the economy rolling, contributing to a cleaner environment and making our cities better places to live and work.

Integrated Rainwater Management: Move to a Levels-of-Service Approach to Sustainable Service Delivery

By Kim A Stephens

In collaboration with Glen Brown, Carrie Baron, Rémi Dubé, John McMahon, Kim Fowler, Stan Westby, Robert Hicks and Jim Dumont

Note to Readers: During the November-December 2010 period, the Water Sustainability Action Plan for British Columbia released a series of five articles that are designed to inform local governments and others about a 'course correction' for **Integrated Stormwater Management Plans (ISMPs)**. The fourth in the series introduced the 'infrastructure deficit' as a driver for the ISMP Course Correction. It connected the dots to Asset Management as a way to re-focus the ISMP process on what really matters. This article is adapted from that series.

Prepare Communities for Change

Use of the ISMP term is unique to British Columbia. First used by the City of Kelowna in 1998, the term quickly gained widespread acceptance by local governments and environmental agencies to describe a comprehensive approach to watershed-based planning in an urban context. In 2001, Metro Vancouver's member municipalities recognized the benefits of integrating hydrology, ecology and land use and made a commitment to the Province to have ISMPs in place by 2014 for their watersheds. Geographically, about half of British Columbia's population resides within these watersheds.

When the Province released **Stormwater Planning: A Guidebook for British Columbia** in 2002, the ISMP approach was expanded and became a recognized provincial process. A decade ago, the approach reflected a significant shift in community values. The implicit goal was to build and/or rebuild communities in balance with ecology – that is, accommodate development while protecting property and aquatic habitat. A decade later, 'climate change' and 'sustainable service delivery' have also become integral parts of the goal.

The term Sustainable Service Delivery describes a life-cycle way of thinking about infrastructure needs and how to pay for those needs over time. The link between asset management and the protection of a community's natural resources is emerging as an important piece in Sustainable Service Delivery.

The Province's **Living Water Smart** and **Green Communities** initiatives constitute an over-arching policy framework that encompasses both the 'ISMP course correction' and asset management. They are preparing communities for change: start with effective green infrastructure and restore the urban fabric. Actions and targets in Living Water Smart encourage 'green choices' that will foster a holistic approach to infrastructure asset management.



A watershed-based plan that is outcome-oriented is a potentially powerful tool to achieve a vision for 'green' infrastructure that: protects stream health, fish habitat and fish; anticipates climate change; connects the dots to Sustainable Service Delivery; is affordable, and is supported by the community.

Do More With Less

An increasing local government 'infrastructure deficit' means that there will be even more competition for available funding. Simply put, this means the cost to renew or replace aging infrastructure exceeds taxpayer ability to pay the cost. The unfunded liability is increasing year after year. Thus, a driver for the ISMP Course Correction is to demonstrate how to 'do more with less' by placing emphasis on what really matters and being outcome-oriented.

Asset management usually commences after something is built. The challenge is to think about what asset management entails BEFORE the asset is built. This paradigm-shift starts with land use planning and determining what services can be provided sustainably, both fiscally and ecologically.

Local governments can develop a truly integrated Asset Management Strategy that views the watershed and the strategy through an environmental lens. This outcome can be achieved through a front-end effort that connects with the community and gets the watershed vision right. Then create a blueprint to implement green infrastructure that truly restores the urban fabric. Recognize that implementation will be a multi-decade commitment.

In the minds of some, the main purpose of an ISMP is to identify infrastructure shortfalls and provide a capital plan for future implementation. Going forward it will be necessary to resolve this apparent divergence in expectations and correctly attribute

future costs to sustaining the environment versus infrastructure renewal. To that end, key objectives of watershed-based Sustainable Service Delivery are identified as follows:

- Recognize that each watershed area is unique, and its needs are unique.
- Integrate drainage planning with land use, environment, parks, and other infrastructure and community needs.
- Have short, medium and long term goals / visions for the plan area, complete with integration of opportunities.

The linkage to asset management is a way to (re)focus ISMPs on outcomes: create a vision of a future watershed complete with intact environmental values, healthy streams abundant fishery resources, and a functional infrastructure. In this context, use of the word 'stormwater' is dated because it is associated with a 'pipe-and-convey' engineering philosophy; and reflects a single function view of the rainwater resource. Furthermore, stormwater is created by human activities.

All in all, the 'stormwater' way of thinking is the antithesis of RAINwater management – which is holistic, landscape-based, seeks to capture rain where it falls, and is guided by a 'design with nature' philosophy. Thus, the time is now right to make the vocabulary change to **IRMP** from ISMP, where IRMP is the acronym for **Integrated Rainwater Management Plan**. This re-branding will help facilitate the current paradigm-shift in the local government setting.

Everyone needs to be thinking in terms of life-cycle costs, especially future recapitalization of the investment. Historically this has not been considered as significantly in traditional infrastructure decision-making. While developers and new home purchasers pay the initial capital cost of municipal infrastructure under either greenfield or redevelopment scenarios, it is local government that assumes responsibility for the long-term cost associated with operation, maintenance and replacement of infrastructure assets.

A rule-of-thumb is that the initial capital cost is about 20% of the life-cycle cost. The other 80% represents an unfunded liability. This underscores the vital necessity of making a sound front-end infrastructure investment decision. Don't build a liability!



Embrace a Level-of-Service Approach

Land use planning in British Columbia may be significantly improved when integrated with asset management planning in local governments. The legislative authority for integration of land use planning and asset management, including financial management, already exists within the Local Government Act and Community Charter.

'Level-of-Service' is the integrator for everything that local governments do. What level of service does a community wish to provide, and what level can it afford? Everyone will have to make level-of-service choices. Thus, a guiding principle for an IRMP could be framed this way: Establish the level-of-service that is sustainable to protect watershed health, and then work backwards to determine how to achieve that level of protection and level of drainage service.

From the stream health perspective, appropriate and effective green infrastructure is a way to increase the level-of-service – for example, green infrastructure that restores the rainfall absorption capacity of the watershed landscape will increase the level of ecological protection. Also, water-centric green infrastructure that maintains or restores the natural water balance has value because it protects aquatic habitat and hence stream health.

To make the link, think in terms of the 'Level-of-Service' an urban tree canopy provides for rainfall interception. As trees grow, the interception capability increases; and the 'infrastructure value' of this natural asset appreciates. This contrasts with pipe assets that depreciate over time.

The process of establishing an acceptable 'Level-of-Service' will require local governments to reassess the rationale for existing practices and standards; and determine whether and what changes may be necessary in future to achieve a balance between cost, affordability and community willingness to pay. If, for example, application of new standards that accommodate climate change would trigger a costly upgrade of existing drainage infrastructure to provide greater system capacity, one could question whether the perceived benefit would justify the cost - particularly if there is no extensive history of widespread flooding and damage resulting from rainfall or storms. One could then ask whether different criteria might result in a lower cost solution.

A shift to a 'Level-of-Service' approach would be a more rational way of providing community infrastructure with acceptable levels of service and cost. The level-of-service concept may need to include a revision of the design standard to a uniform drainage capacity rather than one subject to changing design frequency and intensity.

In short, attribute the costs to the infrastructure, not to the vision of the watershed and not to reduction of impacts to the stream.

Improve the Resiliency of Communities

The accelerating pace of change in our communities will continue, requiring local governments to become much more nimble, collaborative and integrated with a long-term focus. Each local government may determine where to start based on its particular circumstances - whether that be an asset management policy or plan, corporate strategic plan, long-term financial plan or IRMP - but the longer these plans are delayed, the more drastic and/or necessary the following measures will be in order to survive financially:

- Lowering of service levels;
- Reduction or elimination of some assets;
- Challenging risk acceptance limits;
- More collaboration and partnerships; and
- More user pay charges.

The change is here, and it is accelerating. Local governments have an opportunity to mitigate the infrastructure deficit and adapt to climate change within existing legislative authority and by means of a 'design with nature' approach to green infrastructure practices, respectively. The combination will improve the resiliency of communities.

Thus, with respect to landscape-based rainwater management, an **Integrated Rainwater Management Plan** is a vehicle for local government to strategically connect the dots between land use planning, development and infrastructure standards, and asset management. And by 'designing with nature', a local government could make a very strong case for having a higher level of service, at a lower life-cycle cost, with 'assets' that appreciate, not depreciate.

Collaboration, a 'Design with Nature' approach, and re-use of resources are keys to climate change adaptation and infrastructure deficit mitigation

- Develop compact, complete communities
- Increase transportation options
- Re-use and recycle water, energy & nutrients from liquid wastes
- Protect and restore urban 'green' space
- Strive for a lighter 'water footprint'
- Achieve higher levels of stream, wetland and marine environment protection

Update on CSA's Infrastructure Solutions Program (ISP)

By Michael Mortimer, CSA Standards

An overarching objective of CSA's Infrastructure Solutions Program (ISP) is to support the effective management of municipal infrastructure assets. The goal is to provide practical products to help practitioners to implement modern technologies, while addressing a wide range of sustainability issues and helping to facilitate modern asset management. Training products and publications from the program's first phase are now available. Seed funding of \$1.5 million from Infrastructure Canada helped to accelerate their development and introduction.

Infrastructure Canada's financial support, made this comprehensive, and high quality offering possible in a timely manner. Infrastructure Canada's financial contribution was augmented as well, by in-kind and financial contributions from a wide array of other government, industry and sector groups. This enables CSA to offer these products at price points that are affordable and deliver good value.

CSA worked with a wide array of organizations and industry specialists to identify current issues and challenges. Care was taken to identify existing solutions and solutions under development to avoid duplication of effort with other initiatives. Water resource management emerged as central driver for a number of CSA-ISP training courses and publications.

Many BC-based academics and professionals contributed to the program and topic selection. The contribution of members on various working groups was invaluable during the design and development of program components. Hans Schreier, a professor at the Institute for Resources and Environment, at the University of British Columbia was a key proponent for the need for sustainable stormwater guidance and this topic evolved quickly. Robert Hicks, Senior Engineer with Metro Vancouver and Hugh Fraser, Deputy Director of Engineering for the Corporation of Delta, along with input and guidance from Glen Brown and his staff at the BC Ministry of Community Development, were among the many stakeholders from across Canada who offered their time and expertise to help develop and make these solutions available.

CSA's ISP also offers publication solutions associated with municipal water and sanitary plants and distribution systems. This includes a guide on Performance Improvement Tools for Small and Medium-Sized Water and Wastewater Utilities (CSA PLUS 4010). This guide was developed with significant support from members of the Canadian Water and Wastewater

Association, including the BC Water and Wastewater Association, as well as the National Water and Wastewater Benchmarking Initiative. Another significant development relates to the Visual Inspection of Sewer Pipe. Initially, what was planned as a Canadian commentary, evolved into the CSA PLUS 4012 commentary on sewer defect codes, along with the Canadian adaptation of NASSCO's PACP™ program for sewer service inspection technicians and municipal engineers.

Climate change is another issue that requires municipal responses at many levels. Ask many asset managers how they currently factor climate change into their work and many will respond that they focus primarily on greenhouse gases (GHG) emissions reduction. While this is important, it is not enough. Climate change adaptation planning is also essential. In anticipation of weather and climatic trends that will be dramatically different in future, how confident are we in the resilience of infrastructure designed and built under an entirely different set of environmental considerations?

In response to these concerns, CSA's Guideline on the Development, Interpretation and Use of Rainfall Intensity-Duration-Frequency Information (CSA PLUS 4013) is now available to practitioners. Also in response to these concerns, an online course on Adapting your Infrastructure to Climate Change was developed in collaboration with the Federation of Canadian Municipalities. The course provides an overview of a key set of available tools and techniques that support vulnerability assessment, risk evaluation and response planning and provides the opportunity to apply an approach to address locally relevant climate change hazards.

CSA's infrastructure solutions product suite is national in scope but is applicable to a diverse range of unique local and regional conditions. Many site-specific case studies are included within the training products to ensure local relevance.

Phase II of the ISP is underway and additional publications, training and other tools will be launched in future. For more information on CSA Standards' Infrastructure Solutions Program, and to check out the complete product range, please visit www.csa.ca/infrastructure.



Asset Management BC – Where Are We Today?

By Asset Management BC

Entering into a New Year, we are expecting great progress in information sharing and moving our communities forward with asset management plans, strategies and programs. A key objective of **Asset Management BC** is to share information and provide you with a forum to exchange ideas.

Our website (www.assetmanagementbc.ca) has been updated, with new content routinely being added. The final report of the “*State of Asset Management in BC*” is now posted. That study, based on over 150 interviews with 39 communities, evaluated the state of knowledge of asset management in selected communities as a sampling for the Province. Resulting from that study and the knowledge learned from the interview process, we developed the “*AssetSmart*” tool which is a self assessment tool you can use to assess your ‘readiness’ and ‘ability’ to move forward with an asset management strategy. The tool is available for download on the website and can be used internally or with facilitated help.

A current project is preparation of a “*Roadmap*” for Asset Management. The project involves Merritt, Powell River, Lake Country and Tofino as sample communities to look initially at the common elements of asset management and then the differences of each community. The product will be a guide for our communities on the steps necessary to carry out asset management in a logical fashion. We are often asked “what do we do next as we have limited resources?” The roadmap will help you navigate your way through the process. The roadmap, in itself, is not a “how to” manual but a guide to direction.

Our first edition of this newsletter in the fall was well received. We intend to include a regular feature, in this quarterly publication, incorporating a local government case study. Our first edition had a case study from Prince George and another from Qualicum Beach. In the next edition look for a case study from the District of Lake Country. Do you have a story to tell? We would love to publish your case study in a future edition.

During 2010 we completed a *strategic plan* and now need to hear from you as we develop the 2011 work plan. Testing of various tools, learning how to communicate the results across our disciplines and education and training with issues will keep us busy. The focus of Asset Management BC is on integration. We complement our technical and administrative associations in their activities and work together. Be part of the interactive community. Share your knowledge and ask your questions.

Upcoming Events

January through March, 2011 – BCIT Vancouver

Public Works Association of BC

Training Course – PWABC
INFR 1110 January 31 – February 4
INFR 1120 February 28 – March 4
INFR 1130 March 28 – April 1
www.pwabc.cpwa.net

February 8 -10, 2011 – Victoria BC

FCM Sustainable Communities Conference

www.sustainablecommunities.fcm.ca

April 16 – 20, 2011 – Kelowna BC

BC Water & Waste Association

Annual Conference and Trade Show
www.bcwwa.org

May 8 – 11, 2011 – Burnaby BC

Canadian Network of Asset Managers

5th Annual Workshop
www.cnam.ca

May 17 -19, 2011 – Penticton BC

Local Government Management Association of BC

Annual General and conference
www.lgma.ca

May 31 – June 3, 2011 – Nanaimo BC

Planning Institute of BC

Annual conference and exhibits
www.pibc.bc.ca

June 1 – 3, 2011 – Victoria BC

Government Financial Officers Association of BC

Annual conference
www.gfoabc.ca

September 26 – 29, 2011 – Kamloops

Public Works Association of BC

Annual Conference and Trade Show
pwabc.cpwa.net

Asset Management: Tips and Tactics

By Bernadette O'Connor

Asset Components – How much Detail is Enough Detail?

During the PSAB 3150 process many organizations struggled with the decision of – to what level of detail should assets be recorded in their inventory? Today throughout the Province, several different approaches have been used.

Some approaches are suitable for ease of accounting and reporting asset value and amortization but not particularly useful for day to day management of those assets or looking forward to predict life-cycle costs, future cash flow and long-term sustainability.

The following are three prompts to help you determine what is appropriate for your organization;

- Consider how assets are replaced.

If two components of an asset are always purchased or replaced together as one unit, then (unless there is a strong operational reason for itemizing the components separately) they should be recorded, valued and managed as one asset.

- Consider the expected life of the components.

If an asset is comprised of several parts or components and some of these parts will last longer than other parts, then the separable components should be listed in the inventory. For example even though a road is originally constructed as a single complete asset, the surface layer will need to be replaced several times before the lower layer(s) require rehabilitation and the foundation layer will never require replacement.

- Consider the financial significance of the asset.

If a component of an asset is not financially significant then it needn't be separately identified unless there is strong operational reason to do so. However in determining financial significance it is better to look at the value of the component times the number of components. This is because even relatively low cost items can become significant if there are a very large number of them to be managed.

Comments, Quotes and Notes of Interest

From Various Contributors

Our WORD Choice says it all!

INFRASTRUCTURE DEFICIT? Governments and non-profit groups use the terms surplus and deficit. We incur a deficit when we spend more than we have or **OVERSPEND**. But our problem with our infrastructure is we spend less than we should or we **UNDERSPEND**. So we are really creating a negative legacy or **Infrastructure LIABILITY** or **GAP**. It clearly is not a deficit.

People *'hear'* the word 'deficit' and assume the accountants will fix it all. But people *'listen'* to the words *'liability or gap'* and often ask questions or realize some actions are necessary. Similar to what is often stated as a future environmental legacy or *liability*.

So let us start getting it right and drop the term *'deficit'*. What we continue to create by underspending is an **infrastructure LIABILITY** or **GAP**. Let us start using the correct language and tell our politicians and our taxpayers about our infrastructure liability. We in our industry can equally do ourselves a favour by switching to using meaningful story telling terms. Let's work at getting it right and conveying the correct message.

By Wally Wells, Asset Management BC

Hydraulic Models: Asset Management Tools Assist Earthquake Recovery Plans

On 4 September 2010 Christchurch on New Zealand's South Island was rocked by a 7.1 magnitude earthquake. There was significant damage to the City's infrastructure and in particular the underground assets. After the initial emergency response work was completed the City has moved into a long process of recovery and rebuilding.

The water and wastewater hydraulic models, that have been developed over a number of years, are now being used to plan solutions to the many infrastructure issues being faced.

Water models are being used in the short-term to establish how the City will meet high summer demands with a number of the pumping stations still out of service following the earthquake and in the light of increased system leakage caused by damage to public and private pipe work.

In the long term the models will be used to consider rezoning the City to improve system management. Lessons learned from the earthquake emergency response have also identified areas requiring strengthening to improve system robustness and security of supply.

Wastewater models are being used to develop a strategy for the northern area of the City in the light of earthquake damage to existing infrastructure which has reduced system capacity and increased infiltration. Some gradients of pipes have altered significantly as a result of the earthquake. In addition to this, prior to the earthquake, planning was in progress for an investment of up to \$50M for wastewater infrastructure to service significant expected growth in this area. The post earthquake modelling will now look at both increased demand and damage recovery.

Having these hydraulic models built and functioning before the earthquake struck has proven to be an invaluable tool to aid recovery planning.

By Dan Stevens, Water Asset Management (New Zealand)

ISO Standard for Asset Management

Recent news in the world of Asset Management is the development of an Asset Management ISO Standard.

The Australian Institute of Public Works Engineers IPWEA sought comment from various experts and practitioners on the first draft document in December 2010. The World Committee that is developing the standard are scheduled to meet in Melbourne (hosted by IPWEA) in February 2011 to discuss matters raised in that early consultation.

By Graham Dunnet, Int PE (Australia)

Coming in the Spring Edition:

- Update on the Asset Management Roadmap Project
- Case Studies
- Details on the Infrastructure Report Card
- Local Government articles
- Questions and Answers

Asset Management: Questions and Answers

Responses provided by Editorial Panel

Note to Readers: You are invited to email questions to Asset Management BC or to the editor – see final page. Similarly you are also invited to send in comments and you can note in your email whether you do or do not wish your comment or question to be published.

Raising questions and making comment are strongly encouraged as this newsletter is provided for the greater good of all types of Local Governments and Agencies managing infrastructure and for the advancement of Asset Management within the Province.

It is usual that the answer to one person's question will be of use to many. Therefore publication of these will not only be helpful but can also generate productive discussion on a topic and sharing of different perspectives that may otherwise have not been identified.

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