COUNCIL REPORT

REPORT DATE: August 3, 2016
MEETING DATE: August 8, 2016

TO: Liquid Waste Management Plan Steering Committee

FROM: Paul Nash, LWMP Project Coordinator

SUBJECT: LWMP Goals and Evaluation System

RECOMMENDATION

i. THAT Council receive the LWMP Goals and Evaluation System report.

ii. THAT Council approve the LWMP Goals and Evaluation System as presented.

SUMMARY

Through a series of meetings, the Wastewater Advisory Committee (WAC) has developed a set of goals (economic, environmental and social) for the Liquid Waste Management Plan, and specifically the future wastewater treatment and discharge system. These goals form the basis of a two-stage evaluation system to be used to screen and rank the various Options to be developed, and eventually choose the preferred option.

The goals have been reviewed against the major Cumberland policies such as the Village of Cumberland Official Community Plan, the Village of Cumberland 2016 Corporate Strategic Priorities, the 2010 Comox Valley Sustainability Strategy and the Village of Cumberland Social Procurement policy. All but one of the goals are supported by at least one of these policy documents, and some, such as innovation are strongly supported by all of them.

The goals and evaluation system were presented at a public Open House on July 14, 2016, where the public was in substantial agreement with them

The single most important goal identified is “affordability”, being the combination of cost and grant funding opportunity. Noting the importance of this, and the emphasis placed on it at the open house, the WAC has increased the importance of affordability relative to the other economic social, and environmental goals as compared to the rankings that were originally arrived at during the initial goal-setting (brainstorming) process.

The WAC has, by unanimous vote, recommended that these goals now be adopted by the Steering Committee (Council) as the official Goals and Evaluation System for the Liquid Waste Management Plan.

BACKGROUND

Goal Development

The fundamental objective of the LWMP process is to set the desired outcomes, or goals, at the start of the process, and then work out how best to meet them. In a "systems approach", this can be stated as;

1. Identify the problem, and the goals of a successful solution
2. Identify, study and evaluate the alternative solutions
3. Select and implement the best solution

This closely matches the three stage LWMP process, with the addition of continuing public engagement during the process.

The first major task for the WAC was to develop a set of goals and use these to create the evaluation system, and this has now been done. The process used for developing these goals was through;

1. Familiarization of the WAC with the current situation by the site tour and briefings by the technical consultants
2. A committee "brainstorming" session to develop and rank the goals
3. Technical review by the Technical Consultants and Project Coordinator, and creation of the Evaluation System
4. Further discussion by the WAC
5. Presentation to the public at an Open House
6. Comparison of the goals against the major Cumberland planning documents (OCP, 2016 Strategic Priorities, Comox Valley Sustainability Strategy and Social Procurement Policy)
7. A final review by the WAC
8. Recommendation to the Steering Committee

The process of goal development is further detailed in the attached Reports to Committee on the Goal Development and the Open House.

The final list of goals as determined by the WAC, and recommended to the Steering Committee is reproduced on the following page.

The final list of goals is as follows;

Category	Scores (max 40)	Ranking	Description	Goal Type
Affordability	40	1	Ensure tax burden on residents is sustainable. This is both capital and operating costs	Aspirational
Affordability	30	2	Attract grant funding to offset capital costs	Action
Economic	30	3	Productive use of reclaimed water - agriculture, industry (=job creation), potential for reduction in potable water infrastructure requirements	Action
Economic	25	4	Reduce energy use, pursue renewable energy production and obtain GHG credits	Action
Economic	24	5	Attract and retain industry and draw tourism through innovation in meeting community wide goals, and branding green	Aspirational
Economic	12	6	Artist based beautification	Action
Environmental	27	1	Innovation/Environmental leadership	Aspirational
Environmental	23	2	Support health of waterways with robust treatment	Action
Environmental	23	3	Use of existing ecosystems to control cost including low tech or bio solutions plus beneficial use of produced biosolids	Action
Environmental	20	4	Sustainability, Climate Change resilience/adaptation/robustness	Aspirational
Environmental	10	5	Clean air - reduction/avoidance of particulate air pollution	Aspirational
Environmental	9	6	reduce manmade toxins in effluent (pharmaceuticals, hormones, bisphenol A, heavy metals, other trace chemicals, etc)	Action
Social	37	1	Inclusivity of Cumberland to create an identity and positive legacy adding to the social license	Aspirational
Social	15	2	Inclusive costing/metered sewer – a socially equitable sewer rate system	Action
Social	12	3	Purple pipe ready -	Action
Social	8	5	Public education and participation about water, wastewater and related environmental issues	Action
Social	8	5	Garden/Zen/all year green lawns – value of keeping public and private parks and private gardens green even in drought conditions, with reclaimed water.	Action
Social	8	6	Coal Mine/Railroad Heritage – making the works	Aspirational
Social	1	7	Strengthen relationship with Comox Valley	Aspirational
Total Scores	362			

Thus, the Wastewater Advisory Committee recommends this as the final list of Goals for the project.

Evaluation System

The Goals, and their scores, give the relative importance of each goal, and category, which will form the basis of the evaluation system.

The feedback from the Public Open House confirmed that affordability is the single most important goal. An economically, environmentally and socially beneficial solution is of no use if the community cannot afford to actually implement it.

The WAC discussed the affordability issue further at its July 28 meeting and voted to increase the importance of the affordability category, relative to the other benefits. The original and final rankings are shown below.

Category	Scores	Percentage (Original)	Rounded Percentage	WAC Ranking (Final)
Affordability	70	19%	20%	40%
Economic	91	25%	25%	20%
Environmental	112	31%	30%	20%
Social	89	25%	25%	20%
Total	362	100%	100%	100%

Thus the Wastewater Advisory Committee recommends that the evaluation of the Options be based on 40% for affordability score, and 20% each for economic, environmental and social benefits.

The primary purpose of the goal setting is to use them in the screening and evaluation of the various Options to be developed. For the LWMP, an Option is a combination of a discharge location and a suitable treatment system.

In Stage 1, the “long list” of options is developed and screened down to a short list.

In stage 2, the short list is subject to detailed study, and the options are evaluated, against the predetermined goals, and a Preferred Option is selected for financial planning and implementation study in Stage 3.

A two stage Evaluation System has been developed.

In Stage 1, it is a series of “decision gates”, most of which are a pass or fail assessment. Any Option that fails any Gate is eliminated from further study. This system is used to red flag the Options have showstoppers – an issue, which if not resolvable, makes them unacceptable. The affordability category is purely subjective in Stage 1, and it is intended simply to rule out options that are “unaffordable” – so large or complex that the technical consultants deem them not worthy of further study.

The decision gates used for Stage 1 screening, are, in order of application.

Stage 1 Decision Gates

Area	Criteria	Determined by	On basis of	Decision Type
Regulatory	Environmental regulations/ effluent quality	Ministry of Environment Ministry of Health	Discharge location & time of year	**pass/fail**
Technical	Technical feasibility	Technical Consultants	Treatment system required to meet effluent quality	**pass/fail**
	Constructability	Technical Consultants	complexity, site requirements	**high/low**
	Time risk for 2021 deadline	Technical Consultants	complexity, permits, etc	**high/low**
Politics	Politically acceptable to Cumberland	WAC	Cumberland values	**pass/fail**
	Politically Acceptable Externally	WAC+Steering Committee	External Values	**pass/fail**
Affordability	Capital cost	Technical Consultants	Treatment + piping to discharge location - – is it so expensive as to be "unaffordable"	**pass/fail**
	Grant probability	PC+TC+staff	Everything	high/med/ low
	Ability to pay	Staff+Steering Committee	Reserves, borrowing capacity, DCC's	high/med/ low

All the Options that make it through this list are then carried through for detailed study in Stage 2.

For Stage 2, Options are studied in enough detail to establish models of the treatment systems and discharge means, and make meaningful estimates of capital and operating costs, probability of attracting grants, and the relevant economic, environmental and social goals that can be achieved.

It should be noted that many of the goals such as "inclusive pricing" or "reclaimed water" are not specifically characteristic of a Treatment and Discharge Option. That is, they are discretionary and can be applied to any Option. As such, they may increase the benefits obtained at the potential cost of affordability. This is then a true test of the evaluation system – that the overall best value option will be the highest scoring one.

Stage 2 Evaluation System

Criteria	Determined by	On basis of	Decision Type	Weighting	Comments
Affordability	Project Coordinator, Technical Consultant, Staff, Steering Committee	Capital and operating costs, grant funding potential, ability to pay	**score**	**40%**	Operating and maintenance costs to be evaluated as a net present value
Economic Benefits	WAC	4 Economic Benefit Goals	**score**	**20%**	Benefits that occur over the life of the project
Environmental Benefits	WAC	6 Environmental Goals	**score**	**20%**	Benefits that occur over the life of the project
Social Benefits	WAC	7 Social Goals	**score**	**20%**	Benefits that occur over the life of the project
Total				**100%**	

In order to score the Options, each Option is evaluated on the basis of how it addresses each of the 19 Goals.

To score how well an Option achieves each individual Goal, a standardized system is used, similar to evaluating a Request for Proposals. The process is as follows;

1. The Option is given a Ranking from 0 to 1 for how well it achieves each goal
2. The Ranking is multiplied by the Score, to get a Weighted Score for the goal
3. All the Weighted Scores for each category of goals are summed
4. The sum is divided by the maximum possible score, to get a percentage
5. The percentage is multiplied by the Category Weighting (40,20,20,20) to get a Category Score
6. The Category Scores are summed to get the Option Total
7. The Option with the highest Total is deemed to be the preferred Option.

The table below shows the layout of the scoring system. ***An example evaluation is shown with some scores arbitrarily chosen to represent an Option that is relatively low cost, does not make use of reclaimed water, and is relatively low benefit overall. To save space, the goal by goal scoring is only shown for the Affordability and Economic Benefit categories.***

Scoring table

Category	Goal	Points Assigned	Score per Criteria (Multiplier)					Weighted Score	%	Category Weighting	Category Score
			None (0)	Poor (.25)	Fair (.5)	Good (0.75)	Exc. (1.0)				
Affordability	Sustainable Tax Burden	40				0.75		30			
	Attract Grant Funding	30		0.25				7.5			
	Subtotal Affordability	**70**						**37.5**	**53.6%**	**40%**	**21.4**
Economic Benefits	Productive use of reclaimed water	30	0					0			
	Reduce Energy Use	25			0.5			12.5			
	Attract industry and tourism through innovation	24		0.25				6			
	Artist based beautification	12		0.25				3			
	Subtotal Economic Benefits	**91**						**21.5**	**23.6%**	**20%**	**4.7**
Environmental Benefits	**[all environmental goals]**	**112**						**42**	**37.5%**	**20%**	**7.5**
Social Benefits	**[all social goals]**	**89**						**44**	**49.4%**	**20%**	**9.9**
	Total	**362**						**156.5**	**43%**	**100%**	**43.5**

Iterative Options development

While the Goals will be used to eventually select the preferred option, they also serve an important role in guiding the development of the Options themselves. This is especially true for the discretionary goals, which can be applied to any Option.

Thus, the Stage 2 Option development itself becomes an iterative process of trying to develop Options that get the highest score. For a given Option, what can be changed to increase benefits without reducing affordability, and vice-versa. This can be given several iterations, looking at how to implement actions to achieve various benefits, or joint benefits, or attract more funding, or reduce cost. The overall objective is to make each Option the best it can be, so that a choice of several viable and desirable Options is presented.

This is directly comparable to preparing responses to a request for Proposals – the proponent uses the evaluation system to guide them on how to prepare a winning proposal, and runs through options to come up with the highest score possible.

Policy Implications

The set of 19 goals has been reviewed against Cumberland's major planning and policy documents;

- 2014 Official Community Plan. 2014
- Strategic Priorities, 2016
- Comox Valley Sustainability Strategy,2010
- Social Procurement Policy

This review serves several purposes;

1. To see if the goals developed are consistent with the policies
2. To identify any goals that might be against the policies
3. To identify any policy gaps arising from the goals
4. To identify any goal gaps arising from the policies

The results of the review are included with the July 25 Committee Report (attached).

Overall, all but one of the goals ("inclusive pricing") were supported by at least one of the plans, and several were supported by three of four. This shows the WAC has come up with goals that are consistent with the major planning policies, and if most of these goals can be achieved, then significant progress has been made in implementing these policies.

Next Steps

Upon Council confirmation of the proposed LWMP Goals and Evaluation System the WAC will carry on with the remaining steps of the Stage 1 LWMP process, which are to:

- Develop the "Long List" of "Options". It should be noted that the defining feature of an Option is not the "treatment system", but is the "discharge location" for the water. The discharge location, and time of year, determine the effluent quality requirements and the environmental approvals required. It is likely that several different discharge locations can

use the same type of treatment. *Thus, the real problem to be solved is not how to treat the water but where to send it (in summer).*

- Use the decision gates to screen the Long List to the "Short List", that will go for detailed study in Stage 2
- Take the Short List to a public Open House (planned for September 22, 2016)
- Identify any knowledge gaps and other areas of study for Stage 2. Examples include;
    - defining the population growth model to be used
    - addressing houses on septic fields
    - potential uses and customers for reclaimed water
    - energy recovery options
    - different treatment methods
    - biosolids processing options
- Complete the Stage 1 Report (planned for November 30, 2016)

There are two other issues for consideration as we move towards completion of Stage 1.

1. The technical consultants are recommending that Cumberland combine the Stage 1 and Stage 2 work into one report, to be submitted to the Ministry of Environment once the preferred option has been selected. The main benefit of this is that it would save time by going straight into the Stage 2 work without the delay of waiting for the Ministry response. The Stage 1 report would still be completed for Cumberland's benefit, to define the current status of the wastewater system. It would capture all the changes that have happened since the original Stage 1 report in 2001, and define the current status of, and future expectations for, the wastewater system. The combining of the two stages does not materially change the work to be done, but allows it to proceed faster. Approval must be sought from Ministry of Environment to combine stages, and it is done fairly regularly.
2. There is likely to be a call for funding applications to the Federal Clean Water and Wastewater Fund in fall of 2016. This is for projects that can be completed by March of 2018, and the funding is up to 50% of the cost. Cumberland could make an application to this fund, for certain elements of the treatment system, such as headworks improvements, lagoon upgrades, disinfection system and biosolids handling, all of which could be completed in this timeframe. These are all elements that will be part of any treatment system, regardless of the effluent quality or the discharge location. This will be studied further as more details of the funding call are released.

STRATEGIC OBJECTIVE

The 2016 Strategic Objective is to;

> "Develop an environmentally sustainable method of treating the liquid waste that is produced by the Village"

The goals and evaluation system recommended by the WAC encompass this objective and build upon it.

The Stage 1 Decision Gates ensure that any Options are “environmentally sustainable” and “affordable.”

The Stage 2 Evaluation system selects the Option that has the best combination of affordability and benefits.

In effect, the Strategic Objective set by the WAC is to;

> Develop a method of treating and discharging Cumberland’s liquid waste that is not only *environmentally sustainable* but is also *affordable* and, ideally, is *economically productive*, *environmentally enhancing* and *socially beneficial*.

ATTACHMENTS

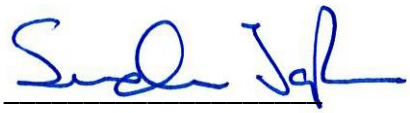
1. WAC Committee Report, 25 July 2016, Results of public Open House
2. WAC Committee Report, 25 July 2016, Recommendation to council of Goals and Evaluation System

OPTIONS

1. That Council, acting as the Liquid Waste Management Plan Steering Committee, adopt the LWMP Goals and Evaluation System as recommend by the Wastewater Advisory Committee
2. Any other action deemed appropriate by Council.

Respectfully submitted,

Paul Nash
Liquid Waste Management Planning Project Coordinator



Sundance Topham
Chief Administrative Officer

COMMITTEE REPORT

REPORT DATE: July 25, 2016
MEETING DATE: July 28 2016

TO: LWMP WASTEWATER ADVISORY COMMITTEE (WAC)

FROM: Paul Nash, Project Coordinator

SUBJECT: Recommendation to Council of Goals and Evaluation System

RECOMMENDATION

1. THAT the Wastewater Advisory Committee receive the Report on LWMP Goals and Evaluation System.
2. THAT the Wastewater Advisory Committee approve the goal setting and two-stage evaluation system as presented;

   AND THAT the goal setting and two-stage evaluation system be forwarded to the Steering Committee for consideration.

SUMMARY

Through a series of meetings, the Wastewater Advisory Committee (WAC) has developed a set of goals (economic, environmental and social) for the Liquid Waste Management Plan, and specifically the future wastewater treatment and discharge system. These goals form the basis of a two-stage evaluation system to be used to screen and rank the various options to be developed, and eventually choose the preferred option. The most important goal identified is affordability, and a range of desired economic, environmental and social benefits have also been identified. The goals and evaluation system were presented at a public Open House on July 14, 2016, where the public was in substantial agreement with them.

The goals have been reviewed against the major Cumberland policies such as the Village of Cumberland Official Community Plan, the Village of Cumberland 2016 Corporate Strategic Priorities, the 2010 Comox Valley Sustainability Strategy and the Village of Cumberland Social Procurement policy. All but one of the goals are supported by at least one of these policy documents, and some, such as innovation are strongly supported by all of them.

In addition to being used for evaluation, the goals, and the policies behind them also serve to guide the development of the the various options themselves. By knowing what the most desired outcomes are, the Committee can steer the development of the options towards how best to achieve these outcomes. It is recommended that these goals now be forwarded to the Steering Committee for consideration

GOAL SETTING

The WAC held its goal setting meeting on June 16, 2016. Through a series of facilitated brainstorming sessions, committee members put forward their various Economic, Environmental and Social goals.

These were then scored by a "range voting" system, where each of the eight members present scored the goals from zero to five. The scores were tallied up for all the goals in each category, and then ranked by score. Goals were consolidated by pairing similar goals, using the highest vote given by each committee member for either of the two goals. Some goals were eliminated on the basis that the LWMP process cannot directly address them.

The final list came down to 19 goals, as shown below;

Goal Type	Category	Scores (max = 40)	Ranking	Description
Aspirational	Economic - Cost	40	1	Ensure tax burden on residents is sustainable
Action	Economic - Cost	30	2	Attract grant funding
Action	Economic	30	3	Productive use of reclaimed water - agriculture, industry (=job creation), potable water infrastructure reduction
Action	Economic	25	4	Reduce energy use, pursue renewable energy production and obtain GHG credits
Aspirational	Economic	24	5	Attract and retain Industry and draw tourism through innovation in meeting community wide goals, and branding green
Action	Economic	12	6	Artist based beautification
Aspirational	Environmental	27	1	Innovation/Environmental leadership
Action	Environmental	23	2	Support health of waterways with robust treatment
Action	Environmental	23	3	Use of existing ecosystems to control cost including low tech solution and or bio solutions plus beneficial use of produced biosolids
Aspirational	Environmental	20	4	Sustainability, Climate Change resilience/adaptation/robustness
Aspirational	Environmental	10	5	Clean air
Action	Environmental	9	6	reduce manmade toxins
Aspirational	Social	37	1	Inclusivity of Cumberland to create an identity and or positive legacy adding to the social license
Action	Social	15	2	Inclusive costing/metered sewer
Action	Social	12	3	Purple pipe ready
Action	Social	8	5	Public Education
Action	Social	8	5	garden/Zen/all year green lawns
Aspirational	Social	8	6	Coal Mine/Railroad Heritage
Aspirational	Social	1	7	Strengthen Comox Valley relationship

The votes cast not only give the rankings of the goals within the categories, but also the relative importance placed on the categories;

Category	Votes	Percentage	Rounded Percentage
Economic Cost	70	19%	20%
Economic benefit	91	25%	25%
Environmental	112	31%	30%
Social	89	25%	25%
Total	362	100%	100%

The individual scores and percentages form the basis of the evaluation systems.

POLICY IMPLICATIONS

The goals developed by the WAC have been reviewed against the major planning documents for Cumberland;

- 2014 Official Community Plan. 2014
- Strategic Priorities, 2016
- Comox Valley Sustainability Strategy,2010
- Social Procurement Policy

This review serves several purposes;

1. To see if the goals developed are consistent with the policies
2. To identify any goals that might be against the policies
3. To identify any policy gaps arising from the goals
4. To identify any goal gaps arising from the policies

The results of the review are attached as Table 1. Overall, all but one of the goals were supported by at least one of the plans, and several were supported by three of four.

Village of Cumberland Official Community Plan, 2014

This is the major planning document for the Village, which sets the major growth and economic strategies for the Cumberland for the next 20 years. It has specific sections on infrastructure, but also addresses broader economic and environmental goals, and community well being.

All but two of the 19 goals are referenced in some way in the OCP.

Corporate Strategic Priorities, 2016

The 2016 Strategic Plan contains the very specific goal of “to develop an environmentally sustainable method of treating the liquid waste that is produced by the Village” which sets the basis for the LWMP.

Six of the goals are referenced in the Strategic Priorities for 2016

Comox Valley Sustainability Strategy, 2010

In 2010, the CVRD adopted the Comox Valley Sustainability Strategy, as a partner document to the Regional Growth Strategy. This lays out a plan of the major environmental and sustainability objectives for the time period to 2050. This plan was referenced in the 2014 OCP.

Eleven goals were referenced by the CV Sustainability Strategy

Social Procurement Policy

In 2016 the Village of Cumberland adopted a Social Procurement Policy . The following brief description is from the Policy

> Social procurement leverages the public procurement process for goods and services, to advance positive economic, workforce, and social development outcomes[1]. Social procurement blends financial and social considerations in public sector purchasing to deliver against two bottom lines:
>
> 1 A commitment to purchasing the best value services and products, in keeping with the MEAT criteria, the Most Economically Advantageous Tender; and
>
> 2 A commitment to leverage limited public resources to achieve strategic community outcomes[2].
>
> Infrastructure planning and investment should promote community benefits[5], being the supplementary social and economic benefits arising from an infrastructure project that are intended to improve the well-being of a community affected by the project, such as local job creation and training opportunities (including for apprentices), improvement of public space within the community, and any specific benefits identified by the community.

The Social Procurement Policy gives backing to the concept of integrating social goals into the LWMP project goals, and evaluating the projects partly on the social goals achieved.

Eight of the 19 goals are referenced by the Social Procurement Policy

There are no goals that went against the policies

The lone goal that is not referenced by any of the policies was the one of “inclusive pricing/metered sewer rate”. The purpose of this social goal was to distribute the costs of sewer service fairly among existing customers. The concept of using water meter data to bill for sewer service is well established and common in many communities.

The fact that it was not mention in any of the policies does not necessarily mean this goal should be discarded, it more points to a potential “policy gap”. For the LWMP project, it is recommended that this goal be included, and this is something for Cumberland Council to consider in future policy revisions regarding service delivery and pricing.

There appear to be no “goal gaps” – of major policy requirements that were not captured in the goals

EVALUATION SYSTEM

The primary purpose of the goal setting is to use them in the screening and evaluation of the various Options to be developed. For the LWMP, an Option is a combination of a discharge location and a suitable treatment system.

In Stage 1, the “long list” of options is developed and screened down to a short list.

In stage 2, the short list is subject to detailed study, and the options are evaluated, against the predetermined goals, and a Preferred Option is selected for financial planning and implementation study in Stage 3.

A two stage Evaluation System has been developed.

In Stage 1, it is a series of "decision gates", most of which are a pass or fail assessment. Any Option that fails any gate is eliminated from further study. This system is used to red flag the Options have showstoppers – an issue, which if not resolvable, makes them unacceptable. The decision gates used are, in order of application.

Stage 1 Decision Gates

Area	**Criteria**	**Determined by**	**On basis of**	**Decision Type**
Regulatory	Environmental regulations/ effluent quality	Ministry of Environment Ministry of Health	Discharge location & time of year	**pass/fail**
Technical	Technical feasibility	Technical Consultants	Treatment system required to meet effluent quality	**pass/fail**
	Constructability	Technical Consultants	complexity, site requirements	**high/low**
	Time risk for 2021 deadline	Technical Consultants	complexity, permits, etc	**high/low**
Politics	Politically acceptable to Cumberland	WAC	Cumberland values	**pass/fail**
	Politically Acceptable Externally	WAC+Steering Committee	External Values	**pass/fail**
Affordability	Capital cost	Technical Consultants	Treatment + piping to discharge location	**pass/fail**
	Grant probability	PC+TC+staff	Everything	high/med/ low
	Ability to pay	Staff+Steering Committee	Reserves, borrowing capacity, DCC's	high/med/ low

For Stage 2, the remaining options are studied in enough detail to have meaningful estimates of capital and operating costs, probability of attracting grants, and the relevant economic, environmental and social goals that can be achieved. It should be noted that many of the goals such as "inclusive pricing" or "reclaimed water" are quite discretionary, and can be applied to any Option.

Stage 2 Evaluation System

Criteria	Determined by	On basis of	Decision Type	Weighting	Comments
Net Economic Cost	Project Coordinator, Technical Consultant, staff	Affordability, grant funding potential	**score**	**20%**	Net Cost = [cost - grants]
Economic	WAC	4 Economic Benefit Goals	**score**	**25%**	Benefits that occur over the life of the project
Environmental	WAC	6 Environmental Goals	**score**	**30%**	Benefits that occur over the life of the project
Social	WAC	7 Social Goals	**score**	**25%**	Benefits that occur over the life of the project

To score how well an Option achieves each individual Goal, a standardized system is used. The concept is a ranking from 0 to 1 for any goal, which is then multiplied by the score that goal received from the WAC voting – the "points assigned" to get the Weighted Total. Some example goals are shown below, with some random scoring given

Scoring table

Category	Goal	Points Assigned	Score per Criteria (Multiplier)						Weighted Total
			None (0)	Poor (.3)	Marg. (.5)	Fair (.7)	Good (.9)	Exc. (1.0)	
Economic Cost	Sustainable Tax Burden	**40**					0.9		36
	Attract Grant Funding	**30**			0.5				15
	subtotal	**70**							51
[all other categories]	[all other goals]	**292**							152
	Total Points	**362**							203
	Percentage	**100%**							56%

Thus, all the Stage 2 options are scored according to the goals, weighted by the score used to develop the goals, and expressed as a percentage.

The Option with the highest percentage will be deemed to be the preferred Option.

Potential Changes to the Evaluation System

The system as proposed represents the Committee's best efforts based on the currently available information regarding wastewater circumstances, the Committee's views, and Cumberland's policies. Should there be a major change in any one of these three areas, it is recommended that the evaluation system be reviewed before being applied.

OPTIONS

This report contains the results of the goal setting process and proposed evaluation system for assessing LWMP Options. Based on this, the Committee has three options

1. Approve the Goals and Evaluation system, as presented, and recommend to Council
2. Amend the Goals and Evaluation System, approve and Recommend to Council
3. Reject the Goals and Evaluation System, and start afresh.

Attachments

1. Summary of Goals and Policy References
2. The full posterboards and the powerpoint presentation can be viewed on the LWMP website

Respectfully submitted,

Paul Nash
Project Coordinator
Liquid Waste Management Planning
Village of Cumberland

Category	Goal Description	Cumberland Official Community Plan 2014 - References	Cumberland 2016 Strategic Plan - References	Comox Valley Sustainability Strategy 2010 - References	Cumberland Social Procurement Policy 2016 - References
Economic Cost 40/40	Ensure tax burden on residents sustainable	(5.3.6) Village capacity to finance growth shall be a priority consideration in growth and change decisions. (5.5.2) Ensure the availability of services to meet existing and future community needs in a cost-effective and environmentally-friendly manner. (5.5.3) Complete a life cycle analysis of infrastructure to assess the capital and operating costs of alternative investment options for a given project. Assessment of need, supply and demand strategies should be considered simultaneously. Ensure that developers pay the full cost of providing services as a result of new development.			By expanding the traditional understanding of 'best value' in procurement, to include the generation of positive societal benefits, alongside high quality and competitive bids,2 the Village of Cumberland is working to maximize community benefits and deliver improved socio-economic returns for local taxpayers, within the existing spend.
Economic Cost 24/40	Attract and retain Industry and draw tourism through innovation in meeting community wide goals, and branding green	(6.1, 7.3) Promote the Village as a centre of excellence for environmentally-friendly and innovative businesses and industries. (6.1.2) Accommodate environmentally-friendly technologies and innovative industrial activities in appropriate areas, where sufficient infrastructure exists, or where the extension of existing infrastructure is economically viable without creating an infrastructure burden for existing ratepayers for the term of the land use. (7.3.4.1) Promote the Village as a community that is committed to energy use and emissions reductions in order to attract environmentally-friendly and innovative industries and business employers to the Village and subsequently help increase local employment opportunities.		3.8.1: Promote eco-industrial development that turns wastes into resources. Target % of new industrial developments that incorporate eco-industrial/business ecology design principles: 2020-50%, 2030 - 100%. 8.2.1: Encourage potential opportunities in new green business sectors, particularly those focused on reducing climate emissions. 8.2.2: Develop the economic "brand" and reputation of the Comox Valley as a leader in green industry and progressive economic development.	To stimulate growth and build the capacity of social enterprises in the community. Infrastructure planning and investment should promote community benefits[5], being the supplementary social and economic benefits arising from an infrastructure project that are intended to improve the well-being of a community affected by the project, such as local job creation and training opportunities (including for apprentices), improvement of public space within the community, and any specific benefits identified by the community.

Economic Benefit 30/40	Attract grant funding	(5.5.3) Seek maximum funding for infrastructure development from senior levels of government by taking advantage of special financing opportunities available for innovative efficient infrastructure development. (7.3.4.5) Where funding is available, the Village may implement pilot projects for renewable energy and waste management technologies and systems to assist private and public industries.			In advance of carrying out any procurement, the framework imposes a duty on the public sector buyer; to consider how the purchase might be better leveraged
Economic Benefit 30/40	Productive use of reclaimed water - agriculture, industry (=job creation), potable water infrastructure reduction	(6.1.2) Accommodate environmentally-friendly technologies and innovative industrial activities in appropriate areas, where sufficient infrastructure exists, or where the extension of existing infrastructure is economically viable without creating an infrastructure burden for existing ratepayers for the term of the land use. (6.3.2) Consider new and innovative approaches to urban food production that increase food security, in partnership with citizens, community groups, and other stakeholders.	Investigate water conservation and grey water reuse programs. Review development standards to make them green, economically attractive and flexible	(3.5.1): All wastewater is treated to standards that protect the environment and facilitate non-potable reuse where appropriate. TARGET: % of new or upgraded wastewater treatment plants that provide reclaimed water for non-potable uses. by 2050 - 100%. (3.6.1) .Agriculture will be an increasing draw on the water supplies of the region as the food industry grows. Agriculture needs to take all efforts possible to reduce water consumption; including using treated water where appropriate in place of potable sources. 8.2.2: Develop the economic “brand” and reputation of the Comox Valley as a leader in green industry and progressive economic development. Consider developing pilot projects for water conservation and alternative systems and monitor the results using an Integrated Resource Recovery approach	

Economic Benefit 25/40	Reduce energy use, pursue renewable energy production and obtain GHG credits	(7.3.2) Village energy consumption is managed to give priority to conservation and efficiency, renewable energy alternatives, and the use of low carbon fuels. (7.3.3) Incorporate priority climate change impacts, opportunities, and adaptation measures into all levels of decision making and into long-term planning initiatives. Maximize use of renewable energy for heating. Strengthen energy security by diversifying heat and electricity energy supply. Promote distributed renewable energy solutions. (7.3.4.1) The Village should take a leadership role in promoting adaptation to climate change. (7.3.4.5) Where funding is available, the Village may implement pilot projects for renewable energy and waste management technologies and systems to assist private and public industries.	Reduce corporate greenhouse gas emissions	(3.2.2) Establish Neighborhood Energy Utilities to provide renewable energy to town centres. (3.2.3): Energy is harnessed from waste sources in the community. (3.8.2) Advance the integrated management of infrastructure systems and resources. TARGET: % of new infrastructure systems (water, wastewater, solid waste, etc) that incorporate integrated resource management/ recovery principles: 2020- 75%, 2030 - 100%. 8.2.1: Encourage potential opportunities in new green business sectors, particularly those focused on reducing climate emissions.	Pursue selling GHG credits through the Cowichan Valley CommunityCarbonMarketplace.com. By signing on to the BC Climate Action Charter in 2010, Cumberland committed to reducing greenhouse gas emissions in the community, to becoming carbon neutral, and creating a complete, compact and energy-efficient community.
Economic Benefit 12/40	Artist based beautification	(6.1.2) Build upon both the arts and natural environment as major sources of new economic opportunities for the Village. (8.1.3) The Village should encourage public art as an integral component of the community. The Village should encourage the installation of art on or within the built environment, including private properties, public spaces, parks, trails and streets, where appropriate.	Develop a public art policy	(7.5.1) Investigate the inclusion of a public art levy as part of development cost charges (DCC) to support local art for any large new development project. Integrate the rich artistic resources and offerings into the brand and promotion of the Comox Valley as a great place to live.	enhance community arts and culture infrastructure; to stimulate an entrepreneurial culture of social innovation. Community Benefit Clauses (CBCs) may be added to village contracts. CBCs are contractual obligations undertaken by proponents. Evaluation criteria, to determine how the value/points are to be assigned, will be clearly stated in each procurement process.[The values and criteria assigned will typically vary between a low of 5% and a high of 15%, of the total contract evaluation, depending on the nature of the procurement opportunity.]

Environment 27/40	Innovation/Environmental leadership	(5.5.3) Seek maximum funding for infrastructure development from senior levels of government by taking advantage of special financing opportunities available for innovative efficient infrastructure development. (7.3.4.1) The Village should take a leadership role in promoting adaptation to climate change		Water Goal for 2050 - All wastewater treatment in the Comox Valley will be to tertiary or reuse level .	In advance of carrying out any procurement, the framework imposes a duty on the public sector buyer; to promote innovation
Environment 23/40	Use of existing ecosystems to control cost including low tech solution and or bio solutions plus beneficial use of produced biosolids			Plan implies protecting existing ecosystems, rather than using them. This goal seems to be more about using natural treatment systems (e.g. wetlands), than existing ones.	
Environment 23/40	Support health of waterways with robust treatment	(5.5.2) Ensure sanitary sewage collection, treatment and disposal facilities are maintained to appropriate standards, and mitigate any detrimental environmental effects from these systems. (5.5.6) Protect, restore, and where appropriate enhance the natural stream and wetland habitats that support fish and wildlife resources. (7.1.2) Protect and enhance the integrity of the natural environment including the surrounding landforms, forests, streams, wetlands, lakes, and quality of the air, (7.1.3) Natural landscapes and ecosystem functions will be protected in all land use decisions and government operations of the Village.	Develop an environmentally sustainable method of treating the liquid waste that is produced by the Village	100% of sensitive ecosystems and riparian areas are protrcted and managed to maintain stable health and productivity. (3.5.1): All wastewater is treated to standards that protect the environment and facilitate non-potable reuse where appropriate.	

Environment 20/40	Sustainability, Climate Change resilience/adaptation/robustness	(7.3) Community-wide climate change action planning.	Develop an environmentally sustainable method of treating the liquid waste that is produced by the Village		
Environment 10/40	Clean air	(7.1.2) Protect and enhance the integrity of the natural environment including the surrounding landforms, forests, streams, wetlands, lakes, and quality of the air. (7.3.3.1) The Village shall promote programs that achieve net benefits to air quality and climate change			
Environment 9/40	reduce manmade toxins	(7.1.2) Protect and enhance the integrity of the natural environment including the surrounding landforms, forests, streams, wetlands, lakes, and quality of the air,		(3.5.1): All wastewater is treated to standards that protect the environment and facilitate non-potable reuse where appropriate.	
Social 37/40	Inclusivity of Cumberland to create an identity and or positive legacy adding to the social license	(5.3.6) As resources allow, prepare a "made in Cumberland" growth management framework including (e) Improved natural resources, in particular water (f) Efficient use of existing services and infrastructure (i) Protection and restoration of ecological systems			to stimulate an entrepreneurial culture of social innovation. To stimulate growth and build the capacity of social enterprises in the community. Community Benefit Clauses (CBCs) may be added to village contracts. CBCs are contractual obligations undertaken by proponents. Evaluation criteria, to determine how the value/points are to be assigned, will be clearly stated in each procurement process. [The values and criteria assigned will typically vary between a low of 5% and a high of 15%, of the total contract evaluation, depending on the nature of the procurement opportunity.]

Social 15/40	Inclusive costing/metered sewer				
Social 12/40	Purple pipe ready	(5.5.6) Implement ongoing demand management and education.	Investigate water conservation and grey water reuse programs. Review development standards to make them green, economically attractive and flexible	(3.5.1): All wastewater is treated to standards that protect the environment and facilitate non-potable reuse where appropriate. Consider developing pilot projects for water conservation and alternative systems and monitor the results using an Integrated Resource Recovery approach. (3.8.2) Advance the integrated management of infrastructure systems and resources. TARGET: % of new infrastructure systems (water, wastewater, solid waste, etc) that incorporate integrated resource management/ recovery principles: 2020- 75%, 2030 - 100%	
Social 8/40	Coal Mine/Railroad Heritage	(5.4.3) The Village encourages innovation and application of these practices and technologies in which this can be undertaken without destroying heritage character defining elements, and consideration should be given as to how to balance heritage and upgrading requirements.			
Social 8/40	Public Education	(7.1.2) Continue to promote ecological awareness and learning opportunities related to preserving the local and regional environmental resources.		3.5.1 Develop an educational initiative for the development industry on opportunities and issues related to the recycling and re-use of waste water – design, construction and operation. This ideally involves provincial government.	

Social 8/40	garden/Zen/all year green lawns	(8.2.2) Provide accessible and quality parks, greenways, open spaces, and recreational corridor systems that: a. Protect, restore or enhance biodiversity, environmentally sensitive areas and provide an ongoing supply of ecosystem services		(7.4.1) Create a sustainability education and leadership program, informing residents about projects underway and opportunities to get involved.	improve and enhance public spaces
Social 1/40	Strengthen Comox Valley relationship	(7.1.2) Continue to support local and regional conservation and preservation strategies, particularly cross-jurisdictional partnerships. Meet or exceed the established relevant environmental targets outlined in the Comox Valley Sustainability Strategy Final Plan 2010.			

COMMITTEE REPORT

REPORT DATE: July 22, 2016
MEETING DATE: July 28 2016

TO: LWMP WASTEWATER ADVISORY COMMITTEE (WAC)

FROM: Paul Nash, Project Coordinator

SUBJECT: Report on LWMP Open House #1, 14 July 2016

RECOMMENDATION

THAT the Committee receive the Report on LWMP Open House #1, 14 July 2016 for information.

Purpose

Public engagement is an important and mandatory part of the LWMP process. Building upon the first public event – the Wastewater Lagoon tour of May 28- the second public event was the first LWMP Open House for 2016, held at Council Chambers on Thursday July 14, 2016 from 6 to 9pm.

The purpose of the open house was to;

1. Provide information regarding the LWMP process and the need for the wastewater treatment plant upgrade
2. Show the public the results of the WAC Goal Setting session, and the evaluation system that was subsequently developed
3. Gather feedback on the same
4. Have a forum for general discussion and Q&A on the LWMP process and objectives

Run of Order

The agenda for the evening was;

- 6:00-6:30 Posterboard viewing
    - Public were encouraged to add comments with post notes located on all poster boards
    - Matt, Larry and Paul were at boards to answer any questions or discuss information located on boards (note this information was also included in formal presentation)
- 6:30 – 7:30 Presentation
- Welcome and introductions by Councillor Sullivan
- Presentation by;
    - Matt Ishoy, Chair of the Wastewater Advisory Committee
    - Paul Nash, Project Coordinator

- Larry Sawchyn, Technical Consultant

The event was attended by;

- 13 members of the public
- Mayor Baird and Councillors Sullivan, Ketler, Kishi and Sproule
- WAC Committee Members at Large;
  - Ken Barth
  - Vig Schulman
  - Anya Macleod

Summary of Presentation

The presentation summarized the process and progress to date including;

- The LWMP process, history and current status
- Brief discussion of the major technical wastewater issues and how the selected treatment system will depend on location of discharge, as criteria such as phosphorous will change with alternate discharge receiving environment.
- Videos of recent and relevant projects at Marwayne, AB and Sechelt BC
- Grant funding and some of the criteria for awarding
- Explanation of the "goals", how they relate to the wastewater treatment system, and how they make that system relate to the Village
- Explanation of how a base plant design may not meet goals outlined in OCP and the Comox Valley Regional Plant and discussion on elements WAC wish to review in Stage 1 or Stage 2 process.
- An explanation of each of the Economic, Social and Environmental goals developed by the Committee and the process used to reach current rankings.
- An overview of the Decision Gate screening system planned for Stage 1
- An overview of the Evaluation system, using the Goals, for Stage 2
- Present example comparison of Wastewater goals from Comox Valley Sustainability Strategy
- Video of the relevant Cranbrook wastewater and water reuse project
- Timeline of LWMP process, for remainder of 2016, noting next Open House in September

Summary of public Q&A period

The discussion period opened at just after 7:30, and there were many questions from all members of the audience – public, Councillors and Committee members. The discussion continued until Chair Matt Ishoy formally closed the open house at 9:05pm. Several stayed in room well past 9:30 to further discuss the project or review poster boards.

Examples of questions asked;

- What is the significance of the Jan 1, 2021 timeline.
- What is the difference between Federal and Provincial wastewater treatment regulations?
- What happens if we do not comply?

- Is extra grant money being provided to meet the updated standards?
- Why are we being asked to meet such a stringent phosphorous criteria in Maple Lake Creek?
- Is this treatment equivalent to other Island municipalities?
- Can we still use a wetland, and is the phosphorous level measured on the way in, or out?
- Why are there no details on costs available at this stage?
- Do we require backup discharge location if doing reuse?
- What is our current wastewater flow and what flow rate are we designing for?
- Will adding on these "benefits" add extra cost
- Shouldn't we fix the storm/sewer separation first, before upgrading treatment?
- How will procurement be handled, how will construction be managed? Will this be a Design Build Operate?
- Does the project include connection to houses not currently served with collection?

Overall, there was general agreement that the goals as displayed reflected the community's values, with the recognition that the most important goal is affordability.

There were a surprising number of brownies left over at the end of the evening. The Refreshments Subcommittee will look into making adjustments to the goodies to people ratio for future meetings.

Attachments

1. Feedback Forms #1,2,3
2. Posterboards and the powerpoint presentation can be viewed on the LWMP website

Respectfully submitted,

_____

Paul Nash
Project Coordinator
Liquid Waste Management Planning
Village of Cumberland

Liquid Waste Management Plan
Feedback Form

Open House on LWMP Goal Setting

14 July 2016

Council Chambers

What are your thoughts on the goals, and rankings as laid out at the Open House?

GOOD

Are there any goals that you disagree with?

NO

Are the any other goals or actions that you would like to see addressed?

NEW DEVELOPMENT: REQUIRED TO SEPARATE STORM WATER
: RAIN WATER FOR TOILETS

What did you think of the format of the Open House, how could it be improved?

GOOD

Was there any information that you were expecting to see, but didn't?

COMPOSTING TOILETS - LOCAL?

Any other comments or questions on the LWMP process?

GOOD PROCESS - THANKS

Please hand this form in at the end of the night, or return to municipal hall
You can also email any questions to LWMP@Cumberland.ca

Liquid Waste Management Plan
Feedback Form

Open House on LWMP Goal Setting

14 July 2016

Council Chambers

What are your thoughts on the goals, and rankings as laid out at the Open House?

- "Support health of waterways with robust treatment depends on receiving environment. Is Bagnes Sound a possible receiving environment?
- Assumes "waterway" is Trent River.

Are there any goals that you disagree with?

- "Innovation" goal ranked too high
- "Clean air" goal not neccessary; perhaps an objective under "Sustainabity"

Too many Social Goals; too many Aspirational Goals

Are the any other goals or actions that you would like to see addressed?

- Education Goal should be ranked higher an is more than a social goal as it would/may address Economic goals of "attracting/retaining industry"; water re-use and energy/GHG reductions.

What did you think of the format of the Open House, how could it be improved?

Presentation - need for clarification questions during presentation.

Not much time for citizen's comments, questions in person and by email

Was there any information that you were expecting to see, but didn't?

Potential funders - especially Feds at first.

Correspondence with MOE

Any other comments or questions on the LWMP process?

How come a consultant was hired to manage the process when the Village has two planners who would have community engagement skills and experience?

Please hand this form in at the end of the night, or return to municipal hall

You can also email any questions to LWMP@Cumberland.ca