

Notice of meeting of the
LIQUID WASTE MANAGEMENT PLAN
JOINT TECHNICAL AND PUBLIC ADVISORY COMMITTEES (TACPAC)

Tuesday, December 11, 2018
Native Sons Hall, Lower Lodge Room, 360 Cliffe Ave, Courtenay
9:00 a.m. -12:00pm

ITEM, TIME	DESCRIPTION	OWNER
3.1 9:00	Call to Order	Allison
3.2 9:00-9:10	Review of Minutes of Meeting #2	Allison
3.3 9:10-9:30	Technical Update <ul style="list-style-type: none"> • Planning horizons • Effluent quality targets • Other 	WSP
3.4 9:30 – 9:50	Goal Setting – Review of meeting #2 results <ul style="list-style-type: none"> • How the goals were sorted and voted • Discussion of results 	Paul
3.5 9:50-10:00	Public Feedback on Goals <ul style="list-style-type: none"> • Feedback from November 27 and 28 sessions 	Christianne
3.6 10:00-11:40	Turning the goals into an evaluation system <ul style="list-style-type: none"> • Sorting the goals for actions, and non-specific goals • Proposed evaluation system and weightings for each LWMP component: <ul style="list-style-type: none"> ○ Conveyance ○ Treatment ○ Resource Recovery • Example evaluation • Review and discussion <p><i>Make a recommendation to the Comox Valley Sewage Commission about goals and evaluation</i></p>	Paul
3.7 11:40-11:50	Preview of TACPAC Meeting #4, 24 th January 2019 <ul style="list-style-type: none"> • Developing the long list of options • Example of an option description 	Paul
3.8 11:50- 12:00	Round table discussion	Allison
3.9 12:00	Adjournment	Allison

Attachments

Minutes of TACPAC Meeting #2, November 23

LWMP Goals Report – **Note:** this report will be distributed upon completion

Public Feedback Report – **Note:** this report will be distributed upon completion

Minutes of the meeting of the Liquid Waste Management Plan (LWMP) Joint Technical and Public Advisory Committees (TACPAC) Meeting #2 held on Friday, November 23, 2018 in the Comox Valley Regional District Boardroom located at 600 Comox Road, Courtenay, BC, commencing at 9:00am

- PRESENT:**
- A. Habkirk, Chair and Facilitator
 - P. Nash, LWMP Project Coordinator
 - M. Rutten, General Manager of Engineering Services CVRD
 - K. La Rose, Senior Manager of Water/Wastewater Services CVRD
 - M. Imrie, Manager of Wastewater Services CVRD
 - C. Wile, Manager of External Relations CVRD
 - J. Boguski, Branch Assistant – Engineering Services CVRD
 - A. Idris, Engineering Analyst CVRD
 - A. Bennett, WSP
 - W. Cole-Hamilton, City of Courtenay Councillor PAC
 - K. Grant, Town of Comox Councillor PAC
 - A. Hamir, Lazo North (Electoral Area B) Director PAC
 - C. McColl, K’ómoks First Nation PAC/TAC
 - T. Ennis, Comox Valley Conservation Partnership PAC
 - D. Winterburn, BC Shellfish Growers Association PAC
 - S. Wood, Comox Business Improvement Association PAC
 - S. Carey, Courtenay Resident Representative PAC
 - T. Serviz, Courtenay Resident Representative PAC
 - K. Niemi, Courtenay Resident Representative PAC
 - K. vanVelzen, Comox Resident Representative PAC
 - D. Jacquest, Comox Resident Representative PAC
 - R. Craig, Comox Resident Representative PAC
 - M. Holm, Area B Resident Representative PAC
 - M. Lang, Area B Resident Representative PAC
 - L. Aitken, Area B Resident Representative (Observer) PAC
 - J. Steel, Area B Resident Representative (Observer) PAC
 - D. Cherry, VIHA TAC
 - P. Kumar, VIHA TAC
 - R. O’Grady, City of Courtenay Engineering TAC
 - S. Ashfield, Town of Comox Engineering TAC
 - G. Bonekamp, Department of National Defence Engineering TAC
 - A. Bissinger, Department of National Defence (Observer) TAC

ITEMS:

ITEM	DESCRIPTION	OWNER
2.1	<p>Call to Order.</p> <p>Opening remarks by Kris La Rose:</p> <ul style="list-style-type: none"> • CVRD respects and honors the time commitment that each member of the committee is making to participate in our process and that in return, we are committed to sincere engagement and a transparent planning process. 	Allison, Kris

ITEM	DESCRIPTION	OWNER
2.1	<ul style="list-style-type: none"> There has been a lot of study work, analysis and design done for certain elements of the possible works, our intention is for that work to support rather than constrain the planning process. 	Allison, Kris
2.2	<p>Review of Minutes of Meeting #1 & LWMP Roadmap</p> <p>Clarification of minutes;</p> <ul style="list-style-type: none"> Section 1.8: change “How the recommendation got to the Comox Valley Sewage Commission for <i>adoption</i>” to “How the recommendation got to the Comox Valley Sewage Commission for <i>consideration</i>”. (K. van Velzen). <p>Paul reviewed the roadmap, noting the Ministry of Environment position that proper managing of wastewater is “not optional”.</p>	Allison & Paul
2.3	<p>Wastewater 101 – Fundamentals of Wastewater Treatment.</p> <ul style="list-style-type: none"> Aline gave a thorough outline of wastewater treatment. 	WSP
2.4	<p>Regulatory Framework.</p> <ul style="list-style-type: none"> Treatment standards for different discharge environments was included in the wastewater 101 presentation. Of note that standards for some reclaimed water uses align with standards for ocean discharge. 	WSP
2.5	<p>Goals – what are they and how will we use them?</p> <p>Paul outlined the framework of the evaluation system and definitions of:</p> <ul style="list-style-type: none"> LWMP components (conveyance, treatment, resource recovery), Objectives – functions which must be achieved for each component, Options – different projects that can achieve the objectives, Goals – aspirational goals for things other than the objectives, “Low Cost” is an aspirational goal, Actions – ways to meet or move towards the goals, Evaluation – how well does an option address the goals? <p>The “best” option is the one that achieves all the objectives and as many of the goals as possible.</p>	Paul
2.6	<p>Initial public feedback;</p> <p>Christianne presented results of Phase 1 public consultation conducted over summer and fall:</p> <ul style="list-style-type: none"> 22 participants at the summer workshops, 104 responses to online survey, Excellent attendance at the November 6 and 8 Open House at the Comox Valley Water Pollution Control Centre (CVWPCC) – 110 people. <p>Major themes:</p> <ul style="list-style-type: none"> Concern about negatively impacting the environment, Importance of long term planning and making sound decisions now, Importance of moving forward quickly due to risks of ageing infrastructure. 	Christianne

ITEM	DESCRIPTION	OWNER
2.7	<p>Examples of award winning, goal-driven projects (videos)</p> <p>Conveyance – Marwayne, AB</p> <ul style="list-style-type: none"> Noted that while this was a conveyance project, the funding and FCM award received were for the “neighborhood redevelopment” that took place in concert with the conveyance project <p>Treatment – Sechelt BC</p> <ul style="list-style-type: none"> Noted that this project was the result of community-set goals to treat to high standards and pursue resource recovery. The reclaimed water is not yet being used. Resource Recovery – Cranbrook BC (video) (case study) 	Paul
2.8	<p>Committee Exercise – brainstorming the goals. PAC, TAC and Staff</p> <ul style="list-style-type: none"> Categories for the goals: <ul style="list-style-type: none"> Technical/functional, Cost/affordability, Economic benefit, Environmental benefit, Social benefit. <p>A five minute “written brainstorming” session was held for each of the three LWMP components, with goals being written on sticky notes and posted to the flip charts. The final count was 168 goals distributed as:</p> <ul style="list-style-type: none"> Conveyance 67, Treatment 54, Resource Recovery 47. <p>The goals were sorted and grouped ready for voting over the lunch break.</p>	Allison
2.9	<p>Comparison of committee goals to official plan goals.</p> <p>CVRD Staff reviewed the major planning documents for goals and policies related to wastewater:</p> <ul style="list-style-type: none"> Official Community Plan’s, Regional Growth Strategy, Comox Valley Sustainability Strategy, Climate Action Revenue Incentive Program. <p>Results of this are attached to the minutes as Table 1(A) through Table 1 (C).</p>	Paul
2.10	<p>Turning the goals into the evaluation system.</p> <p>Explanation of the evaluation matrix as a guide for decision making.</p> <p><i>*Note for clarity that the example scoring shown for the Comox No.2 Pump Station Project was merely to illustrate how the evaluation system functions. It does not represent the actual evaluation of this project.</i></p>	
	Lunch Break	
2.11	<p>Prioritising the goals.</p> <ul style="list-style-type: none"> Ranking of the cost and benefit goals by PAC members, Ranking of the functional goals by the TAC members. <p>Ranking was performed by a numerical voting system, with different colours representing PAC and TAC members.</p>	Allison

	There were too many goals and votes to be tallied at the meeting, this was done offline.	
ITEM	DESCRIPTION	OWNER
2.12	<p>Preview of;</p> <ul style="list-style-type: none"> • Public Workshops (Phase 2 of consultation) on November 27 and 28, 2018: <ul style="list-style-type: none"> ○ Public review of draft goals and objectives. • TACPAC #3 on December 11, 2018: <ul style="list-style-type: none"> ○ Review of public feedback, make recommendation on goals. 	Allison
2.13	<p>Round Table discussion and Q&A.</p> <p>The following summarises the pertinent questions and answers for the meeting:</p> <ul style="list-style-type: none"> • Water use at the CVWPCC was reduced by a third over the last two years due to recycling water at enclosed water uses. However, we recognize there is still room for improvement (M. Imrie). • How are pathogens disinfected at the CVRD Compost Facility? (W. Cole-Hamilton) <ul style="list-style-type: none"> ➤ The composting process and the disinfection is controlled by controlling the temperature. High temperature for a set period of time kills pathogens. (M. Imrie) • Are the categories set in stone or is there room for making changes in them? Is there an opportunity for committee members to come up with more goals? (R. O’Grady) <ul style="list-style-type: none"> ➤ These are starting points to focus our ideas and save the committee some time. However, if there are good goals to be added, there is room for change. We would like to make the December 11 meeting the deadline for coming up with new goals unless a ‘game changer’ idea comes up later than that date. This is to ensure the process stays focused and on schedule. (A. Habkirk and P. Nash) • What was the basis to create the categories? Surprised to see “economic benefits” in the list. (A. Hamir) <ul style="list-style-type: none"> ➤ These categories are a variation of standard practice. The ‘economic benefits’ category is there to identify potential economic benefits that are typically not directly associated with wastewater systems. (P. Nash) ➤ Economic benefits can also include economic impacts such as impacts of options that may potentially hinder economic benefits would be evaluated. (K. La Rose) • What is the point of achieving advanced levels of treatment (such as the one by Sechelt) if no opportunities for use exist? (W. Cole-Hamilton) <ul style="list-style-type: none"> ➤ The main value is only achieved if the water is indeed reused. The opportunities do exist, but have not yet been pursued, for various reasons. Nevertheless, significant grant funding (up to 50 per cent) was achieved in part due to setting high 	Allison

	goals for innovation and treatment performance and then meeting them. (P. Nash)	
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ITEM	DESCRIPTION	OWNER
2.13	<ul style="list-style-type: none"> • Does this goal setting exercise include future/potential service areas in the region (e.g. South Sewer)? (R. O’Grady) <ul style="list-style-type: none"> ➤ Let us focus on existing service areas for now. (K. La Rose) • Is there collaboration between the municipalities on the sewer plans/projects? (S.Carey) <ul style="list-style-type: none"> ➤ Yes, member municipalities and the CVRD work together collaboratively in different levels (Sewage Advisory Committees, Advisory groups on staff level...etc.). (K. La Rose) • Social Health context can be considered as social benefit from a public health needs perspective. (R. O’Grady) • Is there a second chance for these rankings? (K. VanVelzen) <ul style="list-style-type: none"> ➤ Yes, options ranking can be reviewed if members feel the need for reconsideration. (A.Hebkirk and P. Nash) • High quality effluent is important because of the especially sensitive nature of the local environment. (T. Ennis) <p>In addition to the main requirements for achieving a certain level of effluent quality, the province asks for an Environmental Impact Study to determine the impact of effluent discharge to the local environment. (A. Bennet)</p>	Allison
2.14	<p>Meeting Schedule Change.</p> <p>Note schedule change for TACPAC Meeting # 4, from Thursday, January 17, 2019 to Thursday, January 24, 2019, 9:00 am to 2:00pm, at the CVRD Boardroom.</p>	
2.15	<p>CVRD Wastewater Facilities Tour for PAC members.</p> <p>A familiarization tour of the CVRD facilities will be held on two dates;</p> <ol style="list-style-type: none"> 1. Tuesday 3 Dec, 9am -12, starting at CVRD office 2. Friday 7th Dec 9am -12, starting at CVRD office 	
2.16	<p>Next Meeting.</p> <p>The next LWMP Joint TACPAC meeting will be held on December 11, 2018 commencing at 9:00am at the Native Sons Hall, Lower Lodge Room, 360 Cliffe Ave, Courtenay, BC.</p>	
2.17	<p>Adjournment</p> <p>The meeting adjourned at 2:00pm</p>	Allison

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Tables 1(A) – 1(C) were consolidated from the major planning documents listed below;

- City of Courtenay Official Community Plan ([Courtenay OCP](#))
- Town of Comox Official Community Plan ([Comox OCP](#))
- Comox Valley Regional Growth Strategy ([Comox Valley RGS](#))
- Comox Valley Sustainability Strategy ([Comox Valley SS](#))
- CVRD Climate Action Revenue Incentive Public Report for 2017([CVRD CARIP](#))

TABLE 1: SUMMARY OF WASTEWATER RELATED GOALS FROM MAJOR PLANNING DOCUMENTS

Category	Goal
Technical/Functional	Alternate Trunk Sewer Networks
	Treatment to Tertiary or Reuse Level
	Waste to Resources
Affordability	Reduce Capital Costs
	Low Operating Costs
	Funding through DCC’s
Economic Benefits	Vibrant Local Economy
	Increased Agriculture, Reclaimed Water for Agriculture
Environmental Benefits	Reduce Greenhouse Gases
	Energy Conservation
	Renewable Energy, Energy from Waste Sources
	Green Buildings
	Protect, Conserve and Restore Ecosystems
Social Benefits	Public Health Needs
	Recreation Trails as part of New Developments

TABLE 1(A): CONSOLIDATED REFERENCE POLICY FROM MAJOR PLANNING DOCUMENTS, CONVEYANCE

Conveyance		
Technical/Functional Goals	Environmental Goals	Affordability/Economic Benefits/Social Benefits Goals
<i>Courtenay OCP Sec 6.3. (Page 65):</i> For major new developments, the City shall consider the downstream capacity of existing sewer mains to ensure adequate capacity.	<i>Courtenay OCP Sec 10.2. (Page 139) Goals:</i> To reduce the City’s annual community-wide greenhouse gas emissions 20 per cent below the 2007 levels by 2020, with an incremental reduction target of two per cent per year between 2010 and 2020 by: reducing average energy demand per home by 20 per cent and reduce energy demand for businesses by nine per cent per square meter by 2020, making public sector buildings (and other operations) carbon neutral by 2012.	<i>CVRD RGS (Page 56) Objective 5D-2:</i> New development will replace and/or upgrade aging sewer infrastructure or provide cash-in-lieu contributions for such upgrades through Development Cost Charges or similar financial contributions.
<i>Courtenay OCP Sec 6.3. (Page 65):</i> The City through the development of a Master Sewer Strategy will develop strategies to facilitate providing alternative trunk networks and systems to transport effluent to treatment facilities.	<i>Courtenay OCP Sec 10.3. (Page 144) Objective 4:</i> To use and promote a ‘design with nature’ approach in the provision of energy and design of buildings and infrastructure to make use of ecological processes before employing heavily engineered approaches. This includes minimizing the use of non-renewable energy and resources by increasing the use of low GHG emitting and efficient renewable energy supply systems and resources.	<i>Courtenay OCP Sec 2.2.2. Goal 5 (Page 22):</i> Provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources.
<i>Comox OCP Sec 2.4.5. (Page 95) Policy:</i> The Town will operate a sewerage collection system that will discharge into the main trunk sewers and waste water treatment operated by the CVRD. The Town does not envision the need for waste water treatment or disposal within the Town’s boundaries.	<i>Town of Comox OCP Sec 1.7. Table 2 (Page 19):</i> Encourage reduced energy consumption and greenhouse gas emissions as a long term sustainability community value.	<i>Courtenay OCP Sec 4.11.1 (Page 54):</i> Moving forward, the City must balance its traditional roles with new pressures to continue to expand and increase its responsibilities for community programs within a budget that is accepted by the taxpayers of the City.

Conveyance		
Technical/Functional Goals	Environmental Goals	Affordability/Economic Benefits/Social Benefits Goals
<i>CARIP (Page 9):</i> Community-Wide Actions Proposed for 2018: Install updated odour control measures at the Comox Valley Water Pollution Control Centre; Construction of Hudson and Greenwood Trunk gravity sewer mains.	<i>Town of Comox OCP Sec 2.3.11 (Page 76):</i> Under the BC Climate Action Charter, the town of Comox agreed to develop strategies and take actions to achieve the following goals: Being Carbon neutral in respect of their operations by 2012; Measuring and reporting on their community’s GHG emissions profile	<i>Courtenay OCP Sec 2.1.7. (Page 13):</i> Design with nature, employing energy-conservation principles, emphasizing sustainability, enhancing the natural beauty, and protecting wildlife habitat; and support agriculture as an industry in the Valley.
	<i>CVRD RGS Sec 3.2 Goal5 (Page 21):</i> provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources.	<i>CVRD RGS Sec 3.1 Vision (Page 20):</i> As stewards of the environment, local governments, the K’omoks First Nation, public agencies, residents, businesses and community and non-governmental organizations will work collaboratively to conserve and enhance land, water and energy resources and ensure a vibrant local economy and productive working landscapes.
	<i>CVSS (Page 5):</i> Climate sustainability target: The Comox Valley will reduce overall Greenhouse Gas Emissions by 80 per cent from 2007 levels by 2050. Rationale: This target calls for action on reducing use of fossil fuels and increasing the use of alternative energy sources.	<i>CVRD RGS (Page 56) Objective 5-D:</i> Encourage sewage management approaches and technologies that respond to public health needs and maximize existing infrastructure.
	<i>CVSS (Page 45) Goal 3.1:</i> Reduce energy consumption and greenhouse gas emissions in municipal infrastructure. Objective 3.1.1: Increase energy efficiency in public works infrastructure systems and equipment.	
	<i>CVSS (Page 86) Goal 5.2, CARIP (Page 86- 90) Goal 5.2:</i> Conserve and restore ecosystems.	
	<i>CARIP (Page 3):</i> Current GHG reduction Targets: 20 per cent reduction in corporate GHG emissions by 2020;	

TABLE 1(B): CONSOLIDATED REFERENCE POLICY FROM MAJOR PLANNING DOCUMENTS, TREATMENT

Treatment		
Technical/Functional Goals	Environmental Goals	Affordability/Economic Benefits/Social Benefits Goals
<p><i>Comox OCP Sec 2.4.5. (Page 95) Policy c:</i> The Town will operate a sewerage collection system that will discharge into the main trunk sewers and waste water treatment operated by the CVRD. The Town does not envision the need for waste water treatment or disposal within the Town’s boundaries.</p>	<p><i>Courtenay OCP Sec 10.3. (Page 144) Objective 4:</i> To use and promote a ‘design with nature’ approach in the provision of energy and design of buildings and infrastructure to make use of ecological processes before employing heavily engineered approaches. This includes minimizing the use of non-renewable energy and resources by increasing the use of low GHG emitting and efficient renewable energy supply systems and resources.</p>	<p><i>CVRD RGS (Page 56) Objective 5D-2:</i> New development will replace and/or upgrade aging sewer infrastructure or provide cash-in-lieu contributions for such upgrades through Development Cost Charges or similar financial contributions.</p>
<p><i>CARIP (Page 9):</i> Community-Wide Actions Proposed for 2018: Install updated odour control measures at the Comox Valley Water Pollution Control Centre; Construction of Hudson and Greenwood Trunk gravity sewer mains</p>	<p><i>Town of Comox OCP Sec 1.7. Table 2 (Page 19):</i> Encourage reduced energy consumption and greenhouse gas emissions as a long term sustainability community value.</p>	<p><i>Courtenay OCP Sec 2.2.2. Goal 5 (Page 22):</i> Provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources.</p>
<p><i>CVSS (Page 7) Water sustainability target:</i> The Comox Valley will reduce Non-Agricultural water use by 50 per cent per capita by 2050. All wastewater treatment in the Comox Valley will be to tertiary or reuse level by 2050. Rationale: Tertiary wastewater treatment provides a higher level of environmental protection and creates opportunities to reuse water rather than further use of the fresh water supply</p>	<p><i>CVSS (Page 8):</i> Ecosystems sustainability target: 100 per cent sensitive ecosystems and riparian areas are protected and managed to maintain stable health and productivity by 2050. Rationale: The Courtenay Estuary and the Region’s rivers are ecologically significant. This target reflects the importance of protecting green space for habitat and ecosystem services. 70 per cent of degraded ecosystems that are critical for the health of watersheds. Riparian areas and endangered species habitats are restored by 2050</p>	<p><i>Courtenay OCP Sec 4.11.1 (Page 54):</i> Moving forward, the City must balance its traditional roles with new pressures to continue to expand and increase its responsibilities for community programs within a budget that is accepted by the taxpayers of the City.</p>

Treatment		
Technical/Functional Goals	Environmental Goals	Affordability/Economic Benefits/Social Benefits Goals
<p><i>CVSS (Page 58) Goal 3.5:</i> Liquid waste is handled to minimize negative impacts and to turn wastes into resources. Objective 3.5.1: All wastewater is treated to standards that protect the environment and facilitate non-potable reuse where appropriate. Target: 100 per cent of new or upgraded wastewater treatment plants that provide reclaimed water for non-potable uses by 2050.</p>	<p><i>CVSS (Page 45) Goal 3.1:</i>Reduce energy consumption and greenhouse gas emissions in municipal infrastructure.</p>	<p><i>Courtenay OCP Sec 2.1.7. (Page 13):</i> Design with nature, employing energy-conservation principles, emphasizing sustainability, enhancing the natural beauty, and protecting wildlife habitat; and support agriculture as an industry in the Valley.</p>
<p><i>CVSS (Page 66) Goal 3.8:</i> Principles of industrial or business ecology networks are integrated into mixed-use and industrial areas through planning and infrastructure design as a way of turning wastes into resources.</p>		<p><i>CVRD RGS Sec 3.1 Vision (Page 20):</i> As stewards of the environment, local governments, the K’omoks First Nation, public agencies, residents, businesses and community and non-governmental organizations will work collaboratively to conserve and enhance land, water and energy resources and ensure a vibrant local economy and productive working landscapes.</p>
		<p><i>CVRD RGS (Page 56) Objective 5-D:</i> Encourage sewage management approaches and technologies that respond to public health needs and maximize existing infrastructure.</p>

TABLE 1(C): CONSOLIDATED REFERENCE POLICY FROM MAJOR PLANNING DOCUMENTS, RESOURCE RECOVERY

Resource Recovery		
Technical/Functional Goals	Environmental Goals	Affordability/Economic Benefits/Social Benefits
<p><i>CVSS (Page 7): Water sustainability target:</i> The Comox Valley will reduce Non-Agricultural water use by 50 per cent per capita by 2050. All wastewater treatment in the Comox Valley will be to tertiary or reuse level by 2050. Rationale: Tertiary wastewater treatment provides a higher level of environmental protection and creates opportunities to reuse water rather than further use of the fresh water supply.</p>	<p><i>Courtenay OCP Sec 10.3. (Page 144) Objective 4:</i> The City will work towards integrating infrastructure systems to address multiple low-environmental impact objectives. This includes exploring how to maximize opportunities for harvesting waste heat or generating energy from water and/or wastewater and promote the use of grey water reuse systems in new construction and rainwater capture in all homes.</p>	<p><i>CVRD RGS (Page 56) Objective 5D-2:</i> New development will replace and/or upgrade aging sewer infrastructure or provide cash-in-lieu contributions for such upgrades through Development Cost Charges or similar financial contributions.</p>
<p><i>CVSS (Page 58) Goal 3.5:</i> Liquid waste is handled to minimize negative impacts and to turn wastes into resources. Objective 3.5.1: All wastewater is treated to standards that protect the environment and facilitate non-potable reuse where appropriate. Target: 100 per cent of new or upgraded wastewater treatment plants that provide reclaimed water for non-potable uses by 2050.</p>	<p><i>CVRD RGS (Page 76): Objective 8E:</i> Plan for renewable energy generation; Policy 8E-1. Encourage efforts to increase the use of cost competitive renewable energy. Policy 8E-2. Encourage efforts to increase the use of cost competitive district energy systems. Policy: 8E-3. In reviewing OCPs consider inclusion of cost competitive renewable energy generation policies and development permit guidelines.</p>	<p><i>Courtenay OCP Sec 2.2.2. Goal 5 (Page 22):</i> Provide affordable, effective and efficient services and infrastructure that conserves land, water and energy resources. Courtenay OCP Sec 4.11.1 (Page 54): Moving forward, the City must balance its traditional roles with new pressures to continue to expand and increase its responsibilities for community programs within a budget that is accepted by the taxpayers of the City.</p>
<p><i>CVSS (Page 66) Goal 3.8:</i> Principles of industrial or business ecology networks are integrated into mixed-use and industrial areas through planning and infrastructure design as a way of turning wastes into resources.</p>	<p><i>CARIP (Page 2): Corporate Actions Taken in 2017:</i> Corporate carbon neutral commitment to purchase credits to offset emissions. Corporate Actions Proposed for 2018: Assessment of additional energy conservation measures at recreation facilities; Initiate update of 2011 Corporate Energy Plan.</p>	<p><i>CVRD RGS (Page 56) Objective 5D-3:</i> Promote eco-industrial development that turns wastes into resources.</p>

TABLE 2(A): GROUPED GOALS AND VOTING RESULTS, FOR CONVEYANCE

Component	Conveyance	PAC Voting						TAC Voting					
		Green Dots	Pink Dots	Yellow Dots	Total Dots	Score	% of Total	Green Dots	Red Dots	Yellow Dots	Total Dots	Score	% of Total
Category	Grouping as Voted	5	3	1				5	3	1			
Technical	Resiliency to Climate Change, Natural Disasters and Seasonal Impacts	7	3	1	11	45	10.7%	3	2	0	5	21	12.1%
	Enhance operational resilience	4	5	4	13	39	9.2%	5	0	1	6	26	15.0%
	Maximize use of existing infrastructure	5	3	2	10	36	8.5%	2	2	2	6	18	10.4%
	Plan for long term	3	5	0	8	30	7.1%	6	2	0	8	36	20.8%
	Innovation in Design	0	2	6	8	12	2.8%	0	0	4	4	4	2.3%
	Technical Total				50	162	38.4%				29	105	60.7%
Affordability	Minimize lifecycle costs	5	3	3	11	37	8.8%	2	1	1	4	14	8.1%
	Long Term financial Implications	5	2	3	10	34	8.1%	0	1	0	1	3	1.7%
	Affordability Total				21	71	16.8%				5	17	9.8%
Economic Benefits	Maximize local economic benefits	0	3	4	7	13	3.1%	0	0	2	2	2	1.2%
	Economic Total				7	13	3.1%				2	2	1.2%
Environment Benefits	Minimize impacts to sensitive environment	8	3	1	12	50	11.8%	0	4	0	4	12	6.9%
	Mitigate climate change impacts	2	6	3	11	31	7.3%	1	3	1	5	15	8.7%
	Environmental Total				23	81	19.2%				9	27	15.6%
Social Benefits	Minimize noise and odour impacts	8	3	2	13	51	12.1%	0	1	2	3	5	2.9%
	Maximize community and recreational infrastructure	2	5	8	15	33	7.8%	0	0	4	4	4	2.3%
	Maximize public health benefit	0	2	5	7	11	2.6%	2	0	3	5	13	7.5%
	Social Total				35	95	22.5%				12	22	12.7%
All Categories	Grand Total				136	422	100.0%				57	173	100.0%

TABLE 2(B): GROUPED GOALS AND VOTING RESULTS, FOR TREATMENT

Component	Treatment	PAC Voting						TAC Voting					
		Green Dots	Pink Dots	Yellow Dots	Total Dots	Score	% of Total	Green Dots	Red Dots	Yellow Dots	Total Dots	Score	% of Total
Category	Grouping as Voted	5	3	1				5	3	1			
Technical	Minimize risk of failures/spills	8	7	0	15	61	15.2%	3	3		6	24	13.9%
	Plan for future - population, technology, climate	9	7	1	17	67	16.7%	5	1	0	6	28	16.2%
	Technical Total				32	128	31.9%				12	52	30.1%
Affordability	Minimize lifecycle costs	4	6	8	18	46	11.5%	3	5	0	8	30	17.3%
	Asset management			2	2	2	0.5%	2	2	2	6	18	10.4%
	Allocation of costs between existing and new users	1	1	4	6	12	3.0%	1	2	3	6	14	8.1%
	Maximize Opportunity for Grants	2	9	6	17	43	10.7%	0	4	1	5	13	7.5%
	Affordability total				43	103	25.7%				25	75	43.4%
Economic Benefits	<i>no goals written</i>						0.0%						0.0%
	Economic Total				0	0	0.0%				0	0	0.0%
Environment Benefits	Public awareness about what" not to flush"			1	1	1	0.2%	0	0	0	0	0	0.0%
	Maximize opportunity for partnership	0	4	5	9	17	4.2%	0	0	3	3	3	1.7%
	Maximize effluent quality	11	6	4	21	77	19.2%	4	1	0	5	23	13.3%
	Environmental Total				31	95	23.7%				8	26	15.0%
Social Benefit	Reduce odour from plant	8	2	2	12	48	12.0%	3	0	2	5	17	9.8%
	Only use existing location - no multiple treatment facilities		1		1	3	0.7%	0	0	0	0	0	0.0%
	Maximize opportunity for community amenity at plant	1	3	10	14	24	6.0%	0	0	3	3	3	1.7%
	Social Total				27	75	18.7%				3	20	11.6%
All Categories	Grand total				133	401	100%				48	173	100%

TABLE 2(C): GROUPED GOALS AND VOTING RESULTS, FOR RESOURCE RECOVERY

Component	Resource Recovery	PAC Voting						TAC Voting					
		Green Dots	Pink Dots	Yellow Dots	Total Dots	Score	% of Total	Green Dots	Red Dots	Yellow Dots	Total Dots	Score	% of Total
Category	Grouping as Voted	5	3	1				5	3	1			
Technical	Focus on technologies that are reliable	3	0	1	4	16	4.4%	0	1	0	1	3	2.1%
	Meet Prov. regulatory requirements	0	1	0	1	3	0.8%	2	1	0	3	13	9.0%
	Anticipate future demand for RR	0	0	4	4	4	1.1%	0	0	1	1	1	0.7%
	Ostara (struvite) nutrient recovery	0	1	0	1	3	0.8%	0	0	0	0	0	0.0%
	Build capacity for options, partnerships for future R. Recovery	2	1	4	7	17	4.7%	0	0	0	0	0	0.0%
	Invite medical cannabis greenhouses on-site public-private-partnership	0	1	2	3	5	1.4%	0	0	3	3	3	2.1%
	Microbial lab /research centre	1	1	3	5	11	3.0%				0	0	0.0%
	Technical Total				25	59	16.2%				8	20	13.8%
Affordability	To be cost neutral as a minimum	0	1	0	1	3	0.8%	2	0	0	2	10	6.9%
	Use life cycle costs/NPV	5	4	0	9	37	10.2%	4	2	2	8	28	19.3%
	Energy/Heat recovery	12	5	4	21	79	21.7%	2	2	0	4	16	11.0%
	Productive Use of reclaimed water	12	5	1	18	76	20.9%	2	1	1	4	14	9.7%
	Reduce costs, efficiency in operations, reuse resources at plant	1		1	2	6	1.6%	0	0	0	0	0	0.0%
	Grant Funding eligibility	2	7	1	10	32	8.8%	2	1	0	3	13	9.0%
	Affordability Total				61	233	64.0%				21	81	55.9%
Economic Benefits						0	0.0%					0	0.0%
	Economic Total				0	0	0.0%					0	0.0%
Environment Benefits	Reduce GHG/carbon neutrality	1	6	0	7	23	6.3%	1	1	0	2	8	5.5%
	Recovery for bio-plastics and resins	0	2	2	4	8	2.2%	0	1	0	1	3	2.1%
	Third party utilization (EOI requests)	0	0	7	7	7	1.9%	1	1	2	4	10	6.9%
	Environmental Total				18	38	10.4%				7	21	14.5%
Social Benefit	Public health issues considered for any reclaimed water	0	0	1	1	1	0.3%	2	0	1	3	11	7.6%
	Partnership with university for research	2	4	2	8	24	6.6%	0	2	0	2	6	4.1%
	Educate public on Skyrocket (composted biosolids)	1	0	4	5	9	2.5%	1	0	1	2	6	4.1%
	Social Total				14	34	9.3%				7	23	15.9%
All	Grand Total				118	364	100%				43	145	100%

TABLE 3(A): ALL GOALS AND GROUPINGS AS WRITTEN, FOR CONVEYANCE

Category	Goals As Written	Grouped Goal	
Technical	Long Term Solutions	Plan for long term	
	Incorporate capacity for future growth		
	Think to the next 50 years		
	Ensure capacity for long term growth		
	Must be able to incorporate future government requirements		
	Eliminate need for Comox #2 Pump Station at planned location		
	Consider the entire region		
	Consider Climate Change over 75 years (rising sea level, Puntledge water flows, ...etc.) impact on all new construction	Resiliency to Climate Change, natural disasters and seasonal impacts	
	Conveyance is reliant to natural disasters (flood, earthquakes, etc.)		
	Consider seismic impacts		
	Consider climate change impacts		
	Innovation in design	Innovation in Design	
	Efficiency		
	Gravity if possible, sustainable and reduced energy	Optimize Use of Existing Infrastructure	
	Growth/capacity		
	Maximize opportunity for resource recovery (in conveyance)		
	Build to enhance current infrastructure		
	Maximize use of existing infrastructure that is deemed in good condition and minimal risk (reduced costs)		
	Minimize damage to existing infrastructure (example avoid cutting up recently paved roads) when installing new conveyancing.		
	use existing roads/ROW's to convey to new regional treatment and disposal facilities		
	Reduce infiltration and inflow so that Courtenay and Jane Place pump stations have longer lives before the next upgrade is needed		
	Flow buffering capacity		
	Reduce flow in existing conveyance system by introducing regional treatment facilities		
	Decentralize treatment in outlying areas to limit conveyance to centralized system (e.g. in south and north)		
	Eliminate risks		Enhance operational resilience
	Increase redundancy (decrease critical points of failure)		
	Ensure ability to maintain		
Redundancy			

Category	Goals As Written	Grouped Goal
Technical	Maximize reliability	Enhance operational resilience
	Enhance reliability	
Affordability	Cost effective with high level of efficiency	Consider Lifecycle Costs
	Value vs cost - use value to quantify decisions	
	Minimize life cycle costs	
	Lifecycle budgeting adhered to	
	Full lifecycle costs	
	Minimize life cycle costs	
	Asset management planning for all conveyance	Develop Asset Management Plan
	Asset management considerations	
Economic Benefits	Economic benefit to the community	Maximize local economic benefits
	Local employment in installation	
Environmental Benefits	Forcemain (regardless of useable life left) out of estuary	Minimize impacts to sensitive environment
	Relocate all conveyance from everywhere in K'omoks Estuary	
	Relocate conveyance away from Willemar bluffs	
	Minimise environmental risk	
	Consider the environment	
	Protect Baynes Sound from discharge	
	Use abandoned Willemar bluff line to reduce shoreline erosion	
	Relocate conveyance lines from beneath Courtenay River	
	Energy Efficient	Mitigate climate change impacts
	Consider sustainability	
No net-negative climate change impacts in building and operating conveyance		
Social Benefit	No infrastructure in well-dependent neighborhoods	Minimize infrastructure and operating impacts to residents
	Lowest possible noise and odour	
	Least disruption to residences	
	Minimize disruption to neighborhoods/communities due to new infrastructure	
	Combine new "pipe" with foot/bike bridge	Maximize community and recreational infrastructure
	Contribute to trails/parks/green spaces for public use	
	Bike trails when any new roadwork on main thoroughfares required	
	Bike/walking trails on right of way	
	Multi-use trail/sidewalk if conveyance requires road reconstruction. e.g. sidewalk on Comox Hill	
	Leave amenities like trails and sidewalks after construction e.g. Dryden Hudson trails	
Net positive benefit for residents e.g. bike/walk lanes		

Category	Goals As Written	Grouped Goal
Social Benefit	Maximize opportunity for community benefit	Maximize community and recreational infrastructure
	Connect the sewer system to densely populated areas, small lots with poor soil conditions and old failing septic fields. It provides a health benefit. Areas Croteau beach, Arden, Mission Hill, Royston and South region	Consider public health benefits

TABLE 3(B): ALL GOALS AND GROUPINGS AS WRITTEN FOR TREATMENT

Category	Goals As Written	Grouped Goal
Technical	Reduce risk of failure	Ensure system integrity
	Take proactive approach to maintenance to eliminate [accidental] discharge to ecosystem	
	Maximize reliability	
	Ensure timely, realistic actions are plausible	
	Don't go much higher than provincial and federal regulatory standards	
	Meet required standards	Avoid achieving effluent quality much higher than currently required
	Add disinfection to the current plant	
	Divert flows from Courtenay and Comox pump stations and create tertiary (MBR) facilities at Bill Moore Park and Comox golf course	Plan for future - population., technology, climate
	Resilient to changing conditions/events	
	Have capacity to absorb doubling of population	
	Incorporate best practices	
	Plan for accommodating future technologies	
	Invest in quality processes and technologies for long term value	
	Plan for future demand	
	Like Cranbrook, use proven technology in innovative ways since leading edge tech can be troublesome	
Consider new technology and do away with current plant		
Innovation to achieve GMF grants		
Affordability	Long term lifecycle costs	Minimize lifecycle costs
	Efficiency	
	Capacity/growth	
	Net Present Value (NPV)	
	Sustainable for long term	
	Ensure fairness of costs between new and future users (DCC/CICC)	Allocation of costs between existing and new users
	Asset management	Asset management
	Maximum opportunity for grants	Maximum opportunity for grants
Economic Benefits	Residents in Area B receive economic partnership with shellfish industry (treatment opportunity for boating polluters)	Consider economic partnership and eco-asset approach
	Treatment relies on an eco-asset approach to achieve better treatment at a lower cost with environmental benefits.	

Environmental Benefits	Public awareness about what" not to flush"	Public awareness about flushing habits
	Increase service area to include homes in Area B Croteau Beach and Arden	Extend service boundary to include select new areas
	Treat to the highest quality	Maximize effluent quality
	Treat to the highest standard available	
	Achieve highest possible standards for post-treatment	
	Incorporate most up to date technologies	
	Treatment to eliminate pharmaceuticals	
	Treatment to eliminate micro plastics	
	Eliminate viruses	
	Disinfection	
	Surpass minimum regulatory requirements by 10 per cent	
Treat to exceed minimum standards		
Social Benefit	Stop being sued due to odours	Resolve odour issues at the plant
	Use the highest level of technology to deal with noise and odour	
	No odours	
	No odours	
	Examine affordable ways to reduce impacts of plant - like odours- on neighbours	
	No negative impacts on neighbours that don't receive sewer service	
	Reduce odours to neighbour standards	
	Odours	
	Only use existing location - no multiple treatment facilities	No multiple treatment facilities
	Social determinants of health	Health
	Think of the plant area as a park, a destination	Maximize opportunity for community amenities at plant
	Look for amenities that can be offered the neighborhood, to ease conflict. E.g. water for irrigation or fire protection	
	Enhanced relationships with community (school trips/parkland)	Engage in educating the public about the treatment System
	Partner with SD 71 for k-12 educational training (childhood leads to behavioural change and appreciation of what taxes are used for)	
Increase public access and education opportunities		
Education/skills training opportunities		
Improve public perception of BC's wastewater treatment practices		

TABLE 3(C): ALL GOALS AND GROUPINGS AS WRITTEN FOR RESOURCE RECOVERY

Category	Goals As Written	Grouped Goal
Technical	Like Cranbrook, focus on technologies that are reliable	Focus on technologies that are reliable
	Meet provincial regulatory requirements	Meet provincial regulatory requirements
	Anticipate future demand for recovered resources	Anticipate future demand for recovered resources
	Ostara (struvite) nutrient recovery	
	Build capacity for options and partnerships to recover in future	
	Microbial lab that could conduct research (research centre)	Research opportunities
Affordability	To be cost neutral as a minimum	Use life cycle costs/NPV
	Minimise life cycle costs	
	Reduce capital cost	
	Life cycle costing to factor in potential benefits in future marketing of recovered resource	
	Use energy generated to reduce operational costs	Energy/Heat recovery
	Use to lower our energy footprint	
	Heat recovery for plant	
	Solar panels for power	
	Recover heat to reduce heating costs for buildings at the treatment plant	
	Reclaim heat to reduce operations costs	
	Energy recovery	
	Capture heat energy in conveyance	
	Capture kinetic energy in conveyance	
	Use recovered heat for commercial greenhouses	
	Could treated water be diverted from outfall to market farms along the Queen's Ditch during growing season?	Economically productive use of reclaimed water
	Encourage agricultural activity in Comox Lazo Area B close to the plant from treated water	
	Use the water for purple pipe irrigation	
	Deliver reclaimed water to agriculture	
	Reclaimed water for agricultural use rather than drawing more irrigation water from the Tsolum	
	Research options for using treated water for agriculture	
	Water golf courses	
Use reclaimed water in municipal parks areas		
Ducks Unlimited/Comox Bay Farm		
Recover water to standard that prevents facility from using potable water		
Water municipal holdings		

Category	Goals As Written	Grouped Goal
Affordability	Restoration of wetlands/water reuse	Economically productive use of reclaimed water
	Reclaim as much of the resource as possible	
	Maximum use of all final product water and solids	
	Groundwater disposal can be supplemental by resource recovery to irrigate Bill Moore park and Comox golf course	
	Maximize plant water recovery, reduce costs	
	reclaimed water to residential and agriculture	
	Use public spaces with reduced site footprints for groundwater disposal opportunities and resource recovery use	
	Reduce costs, efficiency in operations, reuse at plant	
	Funding eligibility	Funding eligibility
Economic Benefits	Invite medical cannabis greenhouses on-site public-private-partnership	PPP
	Compost tourism	Tourism
Environmental Benefits	Reduce GHG/ carbon neutrality	Reduce GHG/ carbon neutrality
	Incorporate plans that work in our climate (for storage)	
	Recovery for bio-plastics and resins	
	Third party utilization (EOI requests)	third party utilization (EOI requests)
Social Benefit	Public health issues considered for any reclaimed water	Consider public health
	Social determinants of health	
	Partnership with university for research recovery	Public outreach and education
	Educate public on skyrocket (composted biosolids)	

CVRD LWMP Public Consultation Report



December 10, 2018

Prepared by A.M Habkirk BA MA MPA MCIP

BACKGROUND

This report documents the outcomes of the two public consultation workshops held November 27 & 28, 2018 conducted to solicit feedback on goals developed for the CVRD LWMP by the Technical Advisory Committee and Public Advisory Committee (TACPAC) meeting held November 30, 2018.

The Comox Valley Regional District (CVRD) provides liquid waste management for the City of Courtney and the Town of Comox at the Comox Valley Water Pollution Control Centre (CVWPCC). As the communities grow capacity to deliver liquid waste to the CVWPCC must be expanded by increasing conveyance capacity (installing new pipes in the ground) and potentially upgrading of the CVWPCC to provide a higher level of wastewater treatment.

Consultation for the LWMP is proposed to include four sessions over the life of the Liquid Waste Management Plan development process. The first phase included an online consultation and two workshops sessions held in June of 2018. This report documents the workshop components of the second phase of the public consultation process which will also include a parallel online consultation process.

The input from the workshops and online process will provide input to the PACTAC as they develop a shortlist of options to review.

Future consultation phases are proposed to include:

Mar 2020 Open House #2 (CVRD) - Report back to community on consultation value, results and affect. Supported with online information.

THE PURPOSE OF THE PHASE 2 CONSULTATION WORKSHOPS

The purpose of the workshops was to gain feedback on the goals for the Liquid Waste Management Plan (LWMP) components developed by the PACTAC.

THE WORKSHOP CONSULTATION PROCESS

At each of the two workshops attendees were organized in small groups to discuss and then rank the importance of goals developed for each of the LWMP components: conveyance, treatment and resource recovery. The goals generated by the PACTAC were distributed to each participant in a workbook; copies of the workshop workbook and ranking sheets are attached to this report as Appendix 1.

In total 37 complete ranking sheets were submitted. Attendees were asked to record where they live, and data was sorted by place of residence. The following table shows the distribution by place of residence of attendees. It is interesting to note that there were virtually equal numbers of residents from Courtenay and Comox and a significantly high number of attendees from Area B which is not a participant in the service but is impacted by the service.

Workshop Attendees by residence location	
Comox	10
Courtenay	11
Electoral Area A	1
Electoral Area B	15

WHAT DID THE PUBLIC TELL US?



Workshop results are summarized in the tables below and is presented by component and participant place of residence

CONVEYANCE: November 27 & 28 Workshop Results Courtenay and Comox

	CONVEYANCE Courtenay					CONVEYANCE Comox					CONVEYANCE Area A					CONVEYANCE Area B				
	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI
Technical Goals																				
Ensure infrastructure is resilient to climate change, natural disasters and seasonal impacts.	9	1				9					1				14		1			
Ensure operations are able to adapt to changing conditions.	9	1				8	1				1				14		1			
Maximize the use of existing infrastructure and road right-of-ways.	4	4	3			2	5	1				1			2	4	4	2	3	
Ensure long term viability of infrastructure.	9	1				7	1	1			1				10	3	2			
Utilize innovative design.	3	5	2			6	3	1			1				9	3	3			
Affordability Goals																				
Consider long term financial impact, including minimizing lifecycle costs through asset management.	4	1	3	2		6	3				1				4	7	4			
Maximize opportunity for grant funding.	9		1			5	3				1				6	4	3	1		
Economic Goals																				
Maximize opportunities to enhance the local economy.	3	5	2			4	3	2					1		3	6	4			2
Environment Goals																				
Minimize risks and potential impacts to sensitive environments.	9	1				9					1				13	1	1			
Maximize energy efficiency and mitigate climate change impacts.	5	5				9					1				9	4	2			
Social Goals																				
Minimize noise and odour impacts to community.	7	1	1			6	2	1			1				14	1	4			
Minimize disruptions to communities along conveyance routes.	3		3	2		1	6	2					1		10		8			1
Maximize opportunities for community and recreational amenities.	3	5	1	1		2		4						1	3	1				1



Observations on the Conveyance data overall:

- The rankings for all goals from Courtenay and Comox residents are very similar.
- Overall all goals were ranked relatively high – the majority were ranked very important and important.
- There were a minority of rankings in the somewhat and not important categories.

Observations on the technical goals (Courtenay & Comox):

- rankings were highest for:
 - *Ensure infrastructure is resilient to climate change, natural disasters and seasonal impacts.*
 - *Ensure operations are able to adapt to changing conditions.*
 - *Ensure long term viability of infrastructure.*
- rankings were significantly lower for:
 - *Maximize the use of existing infrastructure and road right-of-ways.*
 - *Utilize innovative design.*
- Rankings for the technical goals from residents of Area B are similar to those from Courtenay and Comox residents except for a higher rating for innovative design from Area B residents

Observations on the affordability goals (Courtenay & Comox):

- rankings were highest for:
 - *Maximize opportunity for grant funding.*
- rankings were lower for:
 - *Consider long term financial impact, including minimizing lifecycle costs through asset management.*
- rankings for the affordability goals from residents of Area B were more distributed across the rankings.

Observations on the economic goal (Courtenay & Comox):

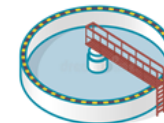
- rankings for the economic goal *Maximize opportunities to enhance the local economy* were relatively evenly distributed across the rankings by all participants.

Observations on the environment goals (Courtenay & Comox):

- rankings were highest for:
 - *Minimize risks and potential impacts to sensitive environments from Courtenay residents and Area B residents.* Comox residents ranked this goal equally with *Maximize energy efficiency and mitigate climate change impacts.*
- rankings were lower for:
 - *Maximize energy efficiency and mitigate climate change impacts* from Courtenay residents and Area B residents

Observations on the social goals (Courtenay & Comox):

- rankings were highest for:
 - *Minimize noise and odour impacts to community including Area B residents*
- rankings were lower for:
 - *Minimize disruptions to communities along conveyance routes except Area B residents ranked this goal higher*
 - *Maximize opportunities for community and recreational amenities.*



TREATMENT: November 27 & 28 Workshop Results Courtenay and Comox

	TREATMENT Courtenay					TREATMENT Comox					TREATMENT Area A					TREATMENT Area B				
	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI
Technical Goals																				
Ensure infrastructure and operations are resilient to climate change, natural disasters and seasonal impacts.	8	1				10					1				13					
Ensure operations are able to adapt to changing conditions.	8		1			7	3				1				11	4				
Maximize the use of existing infrastructure and road right of ways.	2	4	1			3	4	3				1			3	5	1	5		
Ensure assets are relevant for the long term.	7	1	1			7	2	1			1				9	6	1			
Ensure the system has enough capacity to meet future growth.	7	2				8	1	1							8	2	1			
Affordability Goals																				
Consider long term financial impact, including minimizing lifecycle costs through asset management.	4	2	2	1		5	4	1				1			4	7	5			
Maximize opportunity for grant funding.	3		1			6	3	1			1				12	3	3			
Environment Goals																				
Ensure treatment of wastewater exceeds current standards	9					5	3				1				11	4				
Remove artificial contaminants such as pharmaceuticals and micro plastics from wastewater.	6	2	1			8	2				1				13	1				
Ensure energy efficiency and mitigate climate change impacts.	6	1	2			8	2				1				10	4	1			
Social Goals																				
Minimize noise and odour from treatment plant	5	3	1			5	4	1				1			13					
Maximize opportunities for partnerships that achieve a community benefit	4	3	2			5	2	3					1		6	5	3			
Maximize opportunities for community and recreational amenities at/around the treatment plant.	2	2	2	1	1	1	4	3	1				1		4	4	4	2		



Observations on the Treatment data overall:

- The rankings for all goals from Courtenay and Comox residents are relatively similar.
- Overall all goals were ranked relatively high – the majority falling into the very important and important categories.
- A small proportion of the rankings fall into the neither important or unimportant categories.
- Area B residents tended to rank all of the goals higher than did Courtenay and Comox residents.

Observations on the technical goals (Courtenay & Comox):

- rankings were highest for:
 - *Ensure infrastructure and operations are resilient to climate change, natural disasters and seasonal impacts.*
 - *Ensure operations are able to adapt to changing conditions.*
 - *Ensure assets are relevant for the long term.*
 - *Ensure the system has enough capacity to meet future growth.*
- rankings were significantly lower for:
 - *Maximize the use of existing infrastructure and road right of ways*
- Rankings for the technical goals from residents of Area B are similar to those from Courtenay and Comox.

Observations on the affordability goals (Courtenay & Comox):

- rankings for the affordability goals tended to be distributed except for a high very important ranking for *Maximize opportunity for grant funding*

Observations on the environment goals (Courtenay & Comox):

- rankings were highest for:
 - *Ensure treatment of wastewater exceeds current standards*
- rankings were lower for:
 - *Remove artificial contaminants such as pharmaceuticals and micro plastics from wastewater.*
 - *Ensure energy efficiency and mitigate climate change impacts.*
- Rankings from Area B residents were very high for all environment goals with the majority of them in the very important category.

Observations on the social goals (Courtenay & Comox):

- rankings were highest for:
 - *Minimize noise and odour from treatment plant including Area B residents*
- rankings were lower for:
 - *Maximize opportunities for partnerships that achieve a community benefit*
 - *Maximize opportunities for community and recreational amenities at/around the treatment plant.*



RESOURCE RECOVERY November 27 & 28 Workshop Results Courtenay and Comox

	Resource Recovery Courtenay					Resource Recovery Comox					Resource Recovery Area A					Resource Recovery Area B				
	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI	VI	SI	NIU	SU	NI
Technical Goals																				
Use commercially available technology.	5	2	3			4	2	2				1			11	2	2			
Anticipate future demand for resources.	7		3			7	1	1			1				10	3	2			
Improve performance of treatment plant.	6	2	1			6	2	1			1				13		2			
Affordability Goals																				
Explore opportunities to recover heat and energy and offset costs at CVWPCC	8	1	1			5	4				1				11	2	2			
Explore economically productive use of reclaimed water.	9					4	4	1				1			10	4				1
Select resource recovery options that will maximize grant funding opportunities.	8	1	1			4	4	1			1				11	2	1	1		
Explore the potential for external partners to help reduce capital costs.	4	1	3			3	2	4							5	2	6			1
Economic Goals																				
Explore options that can have a positive impact on or grow the local economy	6	1	3			5	1	3					1		6	5	2	1		
Environment Goals																				
Maximize climate change mitigation	6	3	1			8	1					1			9	4	2			
Restore or enhance environmental habitat	7	3				7	1	1			1				10	4	1			
Social Goals																				
Protect public health	9					8	1				1				15					
Ensure ability to maintain irrigation of public parks and gardens during water restrictions.	4	6	1	2		3	4	1		1		1			8	2	3	2		



Observations on the Resource Recovery data overall:

- The rankings for all goals from Courtenay and Comox residents are relatively similar.
- Overall all goals were ranked relatively high – the majority falling into the very important and important categories.
- A small proportion of the rankings fall into the neither important or unimportant categories.
- More rankings in the neither important or unimportant category in the Resource Recovery rankings.
- Area B residents tended to rank the resource recovery goals more highly than did Courtenay and Comox residents.

Observations on the technical goals (Courtenay & Comox):

- rankings were fairly distributed across the very, somewhat and neither important or unimportant categories.
- Area B residents ranked these goals very high compared with Courtenay and Comox residents

Observations on the affordability goals (Courtenay & Comox):

- rankings were highest for:
 - *Explore opportunities to recover heat and energy and offset costs at CVWPCC*
 - *Explore economically productive use of reclaimed water.*
 - *Select resource recovery options that will maximize grant funding opportunities.*
- Rankings were lower for: *Explore the potential for external partners to help reduce capital costs.*
- Courtenay, Comox & Area B ranking were quite similar

Observations on the economic goal (Courtenay & Comox):

- Courtenay, Comox & Area B ranking were quite similar (VI & SI) for: *Explore options that can have a positive impact on or grow the local economy*

Observations on the environment goals (Courtenay & Comox):

- Courtenay, Comox & Area B ranking were quite similar (VI & SI) for: *Maximize climate change mitigation & Restore or enhance environmental habitat*

Observations on the social goals (Courtenay & Comox):

- Courtenay, Comox & Area B ranking were quite similar (VI) for: Protect public health
- rankings were lower for:
 - *Ensure ability to maintain irrigation of public parks and gardens during water restrictions.*

NEXT STEPS

The results of the two consultation workshops will be discussed at the Dec 11, 2018 Technical Advisory and Public Advisory Committees (PAC/TAC) along with the online consultation results and will be considered as they develop a shortlist of options to review.

Appendix 1: Workshop Instructions and ranking pages



CVRD LWMP Public Engagement Workshop Instructions

Background: The CVRD is developing a liquid waste management plan (LWMP) for the City of Courtney and the Town of Comox. The LWMP process is being guided and supported by Technical and Public Advisory Committees (PACTAC) made up of professionals, elected officials from Courtney and Comox, and members of the public.

One of the early steps in the LWMP process is to develop goals for the management of liquid waste. These goals will ultimately be used to evaluate different options for conveyance, treatment and resource recovery of liquid waste.

Draft goals were developed by the Technical and Public Advisory Committees at a meeting held on November 23, 2018.

The purpose of this workshop is to gain feedback from the public on the draft goals developed by the Technical and Public Advisory Committees to ensure they reflect the goals of the community.

The process for this evening includes:

- A short presentation on the LWMP process
- A short presentation on the existing CVRD liquid management system
- Presentation of the PACTAC draft goals
- Small group discussion of the draft goals
- Individual feedback on the draft goals

Following the presentations there will be an opportunity to discuss the various goals with a small number of workshop participants. Take time to consider some of the following questions in your discussions:

- Do you agree with the goals outlined by the PACTAC?
- Are there goals that you think should be removed?
- Are there any goals missing that you think should be included?

Following the group discussion please record your individual thoughts on the relative importance of the draft goals on the attached form. Also note any goals you think should not be included and any goals you think should be added.

When you are finished please drop the form at the door before you leave.

How important are these goals to you?

I live in Courtenay Comox Other please specify where _____

CONVEYANCE

Principal Objectives:

Decommission Willemar Bluffs section of pipeline

Increase capacity for future growth

	Very important	Somewhat important	Neither important or unimportant	Somewhat unimportant	Not important
Technical Goals					
Ensure infrastructure is resilient to climate change, natural disasters and seasonal impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure operations are able to adapt to changing conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize the use of existing infrastructure and road right-of-ways.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure long term viability of infrastructure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilize innovative design.					
Affordability Goals					
Consider long term financial impact, including minimizing lifecycle costs through asset management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize opportunity for grant funding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic Goals					
Maximize opportunities to enhance the local economy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment Goals					
Minimize risks and potential impacts to sensitive environments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure energy efficiency and mitigate climate change impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Goals					
Minimize noise and odour impacts to community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Minimize disruptions to communities along conveyance routes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize opportunities for community and recreational amenities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any goals you think should be deleted?

Are there any goals missing that you think should be included?

How important are these goals to you?

TREATMENT

Principal Objectives:

Upgrades to meet regulatory requirements

Increase capacity for future growth

	Very important	Somewhat important	Neither important or unimportant	Somewhat unimportant	Not important
Technical Goals					
Ensure infrastructure and operations are resilient to climate change, natural disasters and seasonal impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure operations are able to adapt to changing conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize the use of existing infrastructure and road right of ways.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure assets are relevant for the long term.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure the system has enough capacity to meet future growth.					
Affordability Goals					
Consider long term financial impact, including minimizing lifecycle costs through asset management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize opportunity for grant funding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment Goals					
Ensure disinfection of wastewater exceeds current standards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure treatment of wastewater exceeds current standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remove artificial contaminants such as pharmaceuticals and micro plastics from wastewater.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure energy efficiency and mitigate climate change impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Goals					
Minimize noise and odour from treatment plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize opportunities for partnerships that achieve a community benefit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maximize opportunities for community and recreational amenities at/around the treatment plant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any goals you think should be deleted?

Are there any goals missing that you think should be included?

How important are these goals to you?

RESOURCE RECOVERY

Principal Objectives:

Explore opportunities to recover and reuse resources from wastewater

- Water
- Heat/energy
- Nutrients

	Very important	Somewhat important	Neither important or unimportant	Somewhat unimportant	Not important
Technical Goals					
Use commercially available technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anticipate future demand for resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve performance of treatment plant.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Affordability Goals					
Explore opportunities to recover heat and energy and offset costs at CVWPCC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explore economically productive use of reclaimed water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select resource recovery options that will maximize grant funding opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Explore the potential for external partners to help reduce capital costs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic Goals					
Explore options that can have a positive impact on or grow the local economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment Goals					
Maximize climate change mitigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restore or enhance environmental habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Goals					
Protect public health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure ability to maintain irrigation of public parks and gardens during water restrictions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Are there any goals you think should be deleted?

Are there any goals missing that you think should be included?

How satisfied are you with this workshop as an opportunity to have your voice heard?

Very satisfied

Satisfied

Somewhat satisfied

Not satisfied

Survey Report

27 November 2018 - 09 December 2018

Goals and Objectives - Comox Valley Sewer Service Planning

PROJECT: Help shape the future of our Sewer System in
Courtenay and Comox

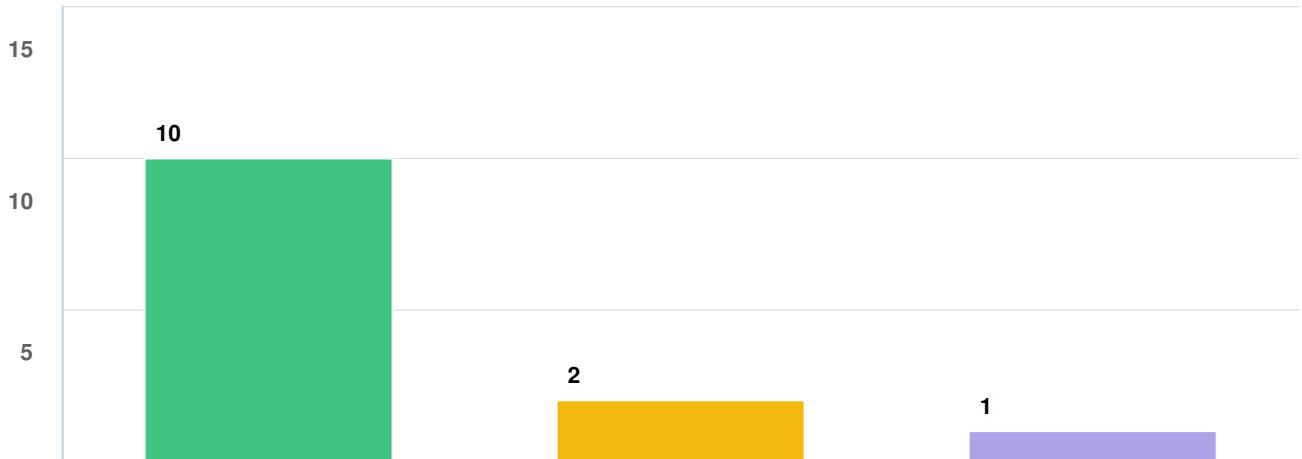
Connect CVRD



CONVEYANCE

The first series of questions focuses on CONVEYANCE: How important are these goals to you regarding conveyance (the pipes and pump stations that move wastewater from homes/businesses to the treatment plant).

Q1 Ensure infrastructure is resilient to climate change, natural disasters and seasonal impacts.

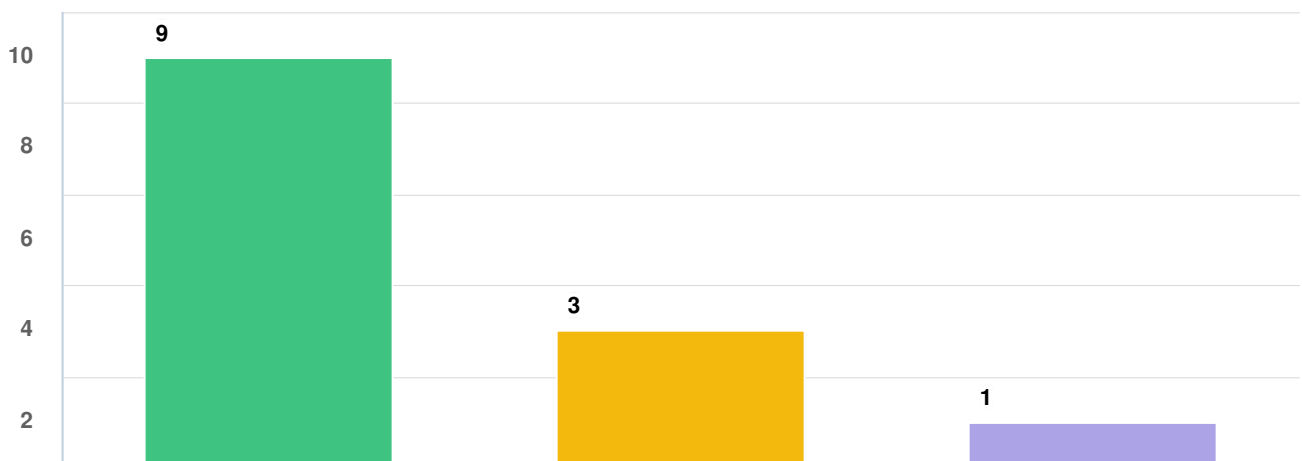


Question options

● Very Important ● Somewhat important ● Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q2 Ensure operations are able to adapt to changing conditions.

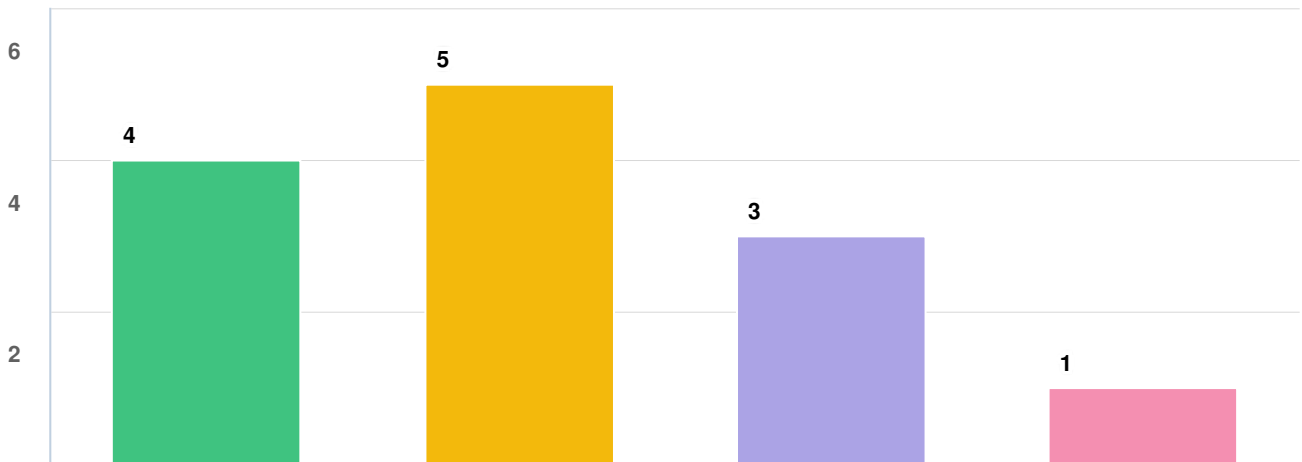


Question options

● Very important ● Somewhat important ● Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q3 Maximize the use of existing infrastructure and road right of ways.

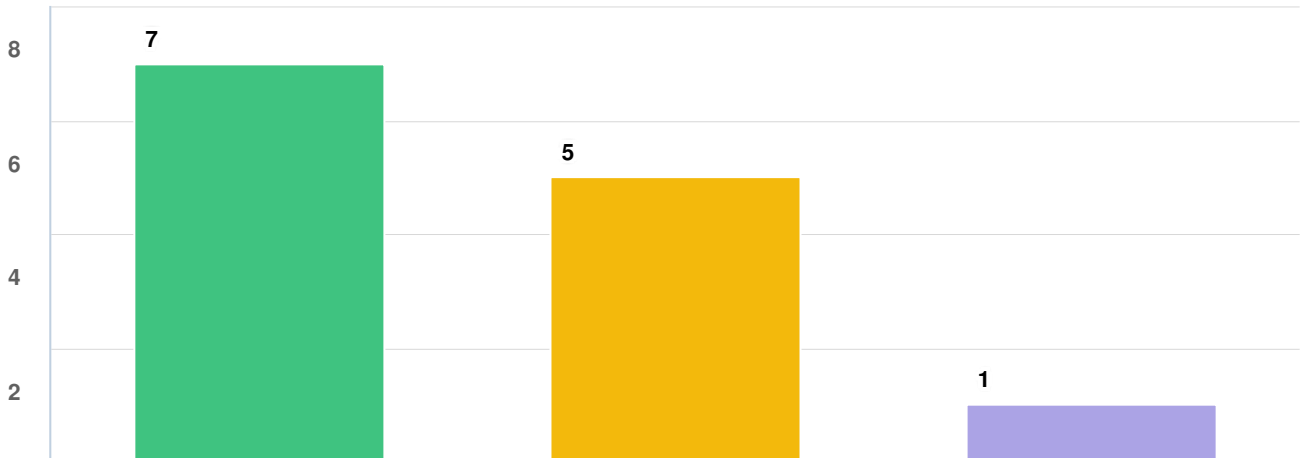


Question options

- Very Important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant

Optional question (14 responses, 0 skipped)

Q4 Ensure long-term viability of infrastructure.

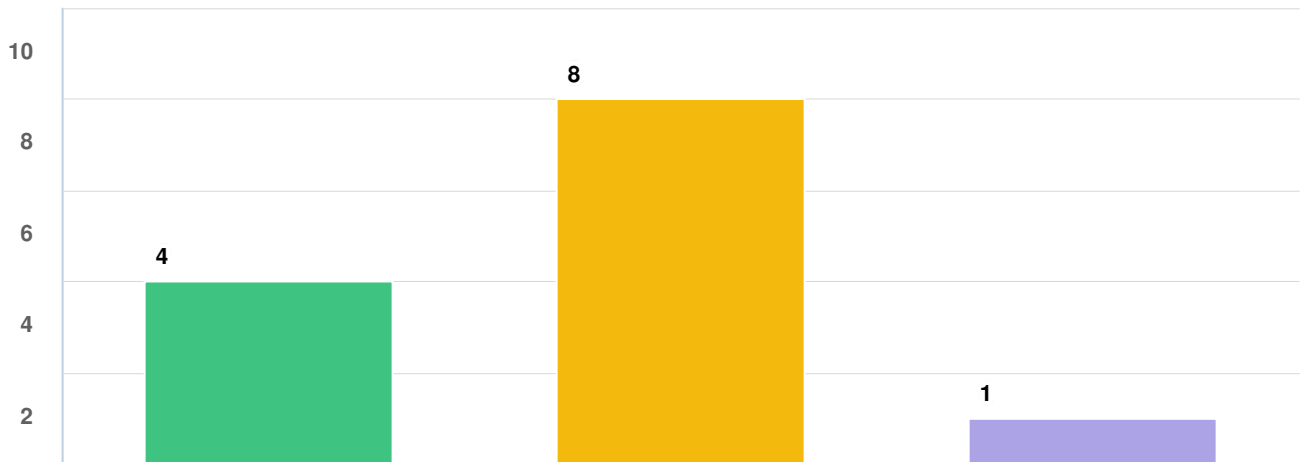


Question options

- Very Important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q5 Utilize innovative design.

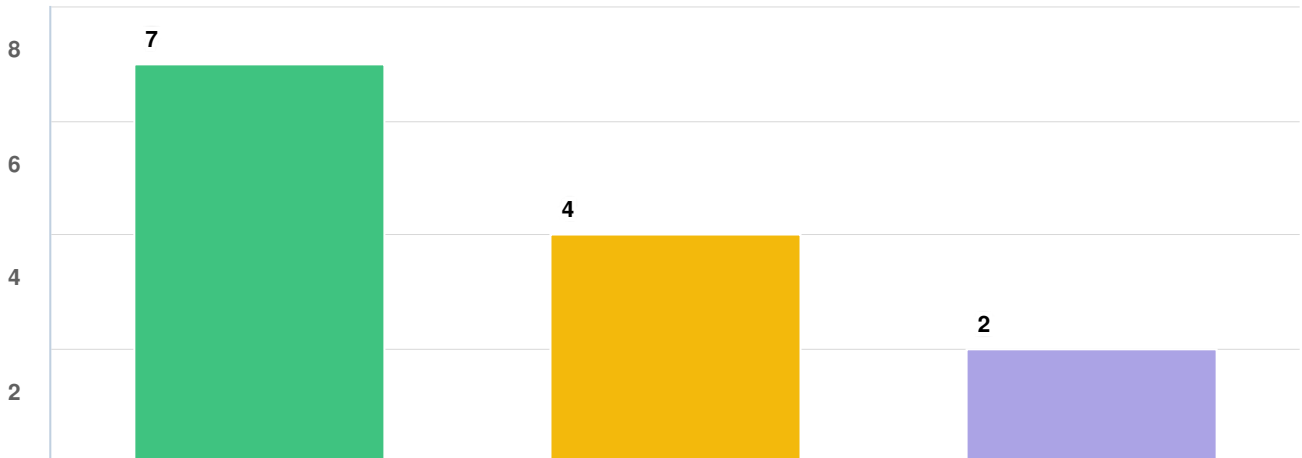


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q6 Consider long-term financial impact and minimize lifecycle costs

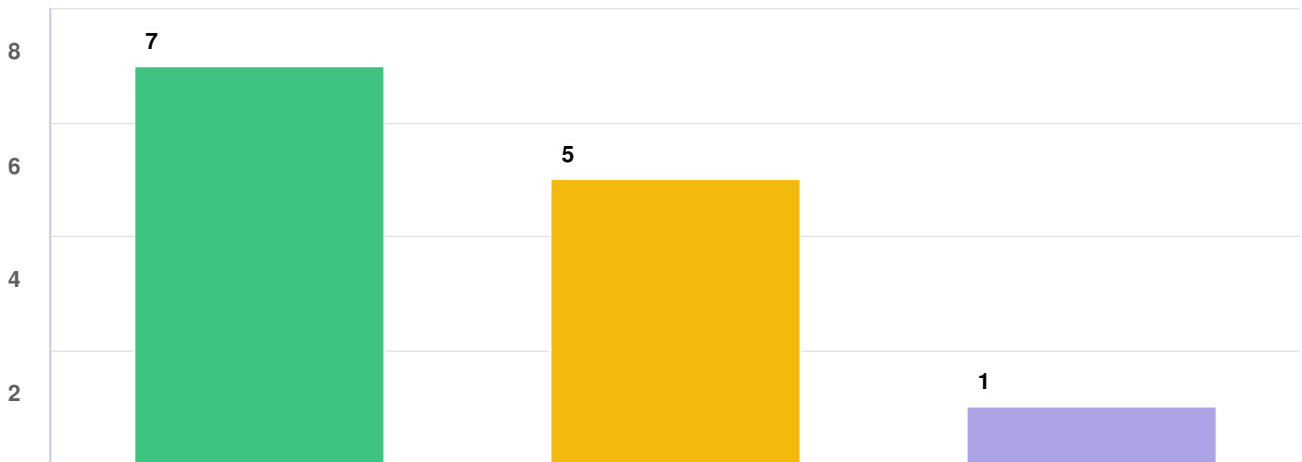


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

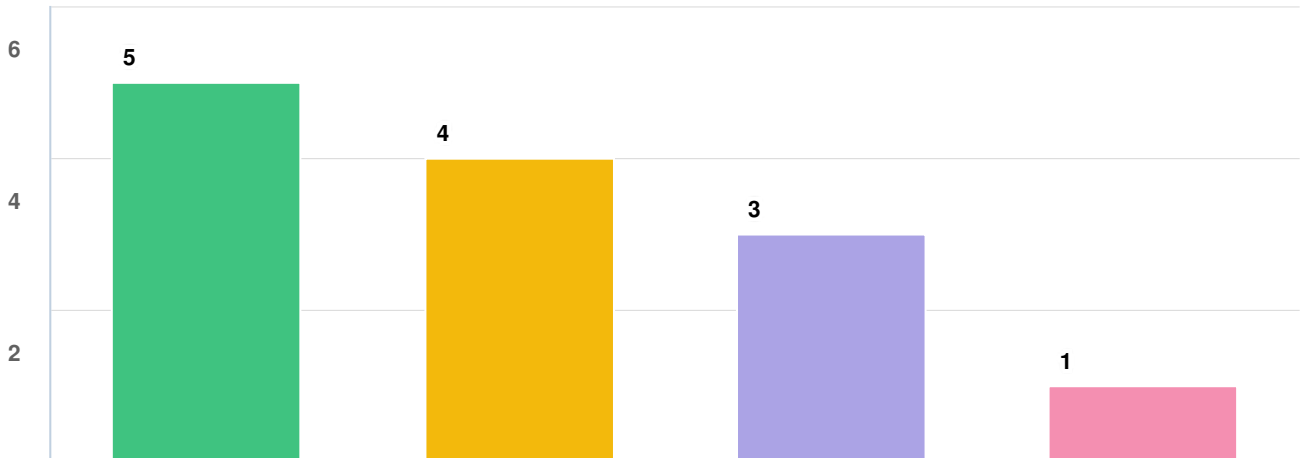
Q7 Maximize opportunity for grant funding.



Question options

- Very important
 - Somewhat important
 - Neither important or unimportant
- Optional question (14 responses, 0 skipped)*

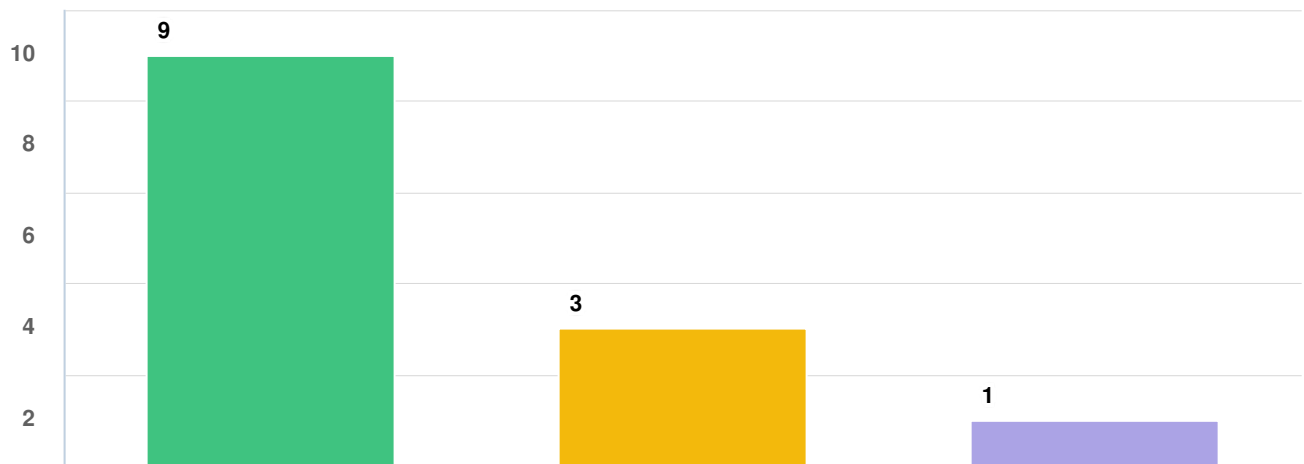
Q8 Maximize opportunities to enhance the local economy.



Question options

- Very important
 - Somewhat important
 - Neither important or unimportant
 - Not important
- Optional question (14 responses, 0 skipped)*

Q9 Minimize risks and potential impacts to sensitive environments.

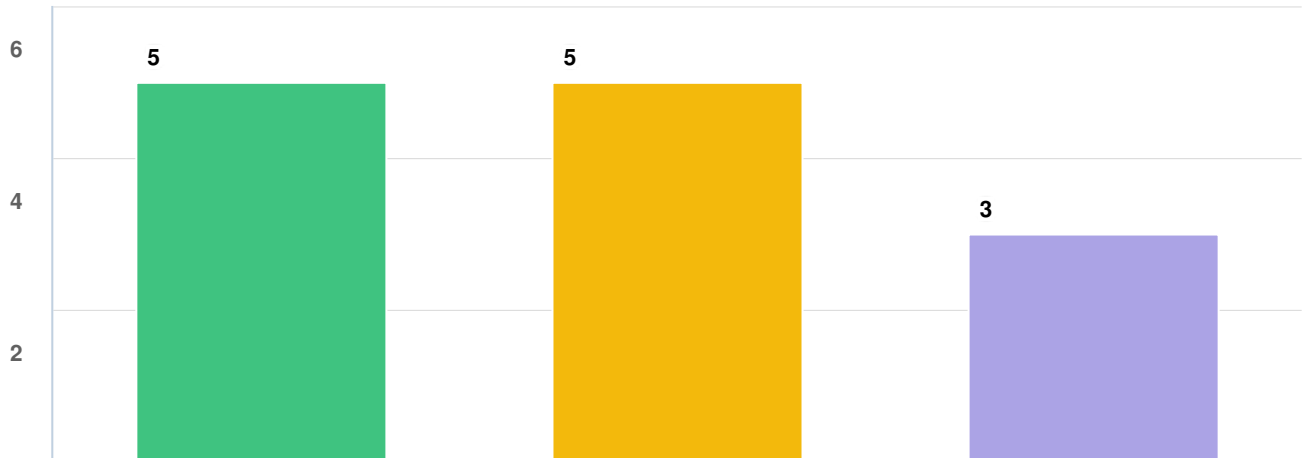


Question options

- Very important
- Somewhat important
- Somewhat unimportant

Optional question (14 responses, 0 skipped)

Q10 Maximize energy efficiency and mitigate climate change impacts.

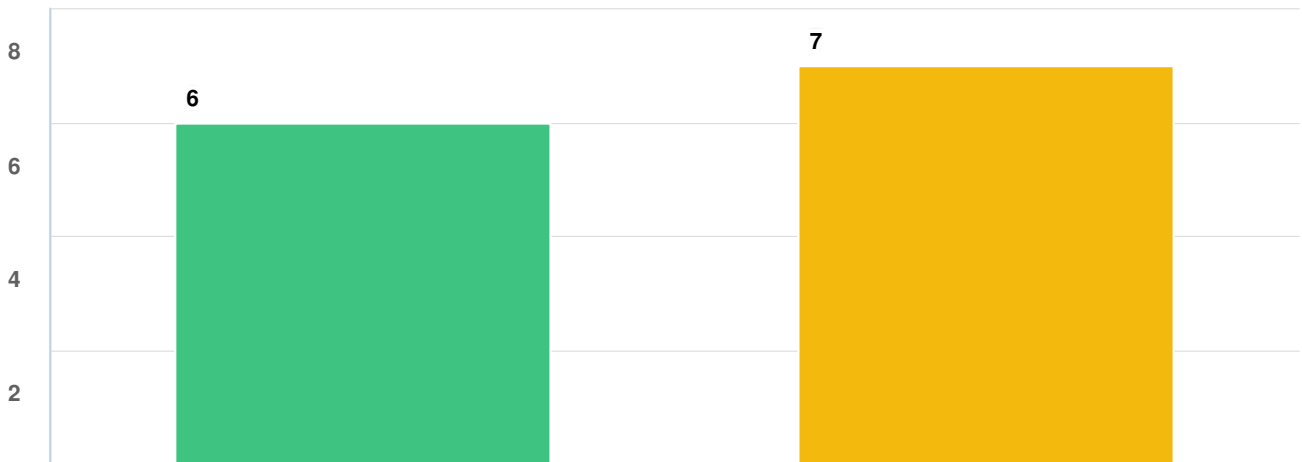


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q11 Minimize noise and odour impacts to the community.

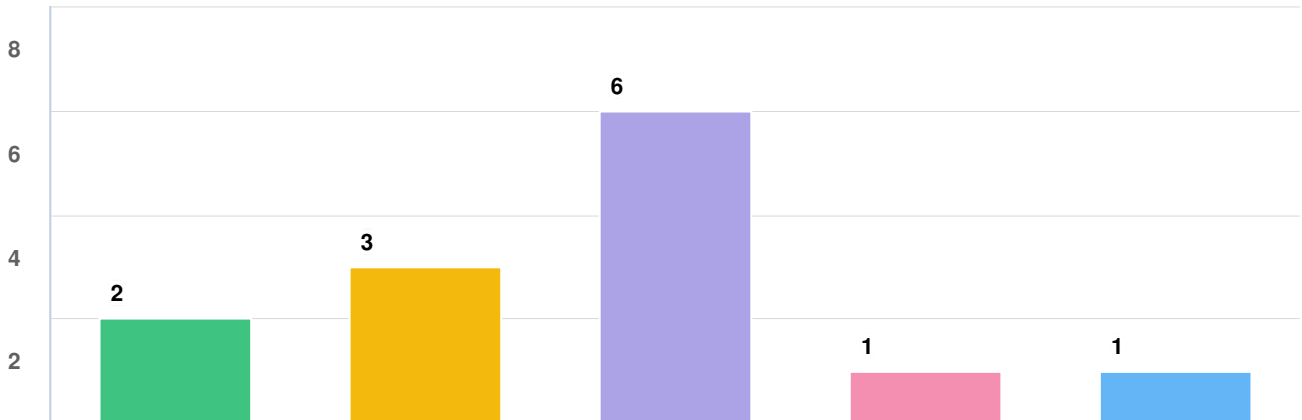


Question options

- Very important
- Somewhat important

Optional question (14 responses, 0 skipped)

Q12 Minimize disruptions to communities along conveyance routes.

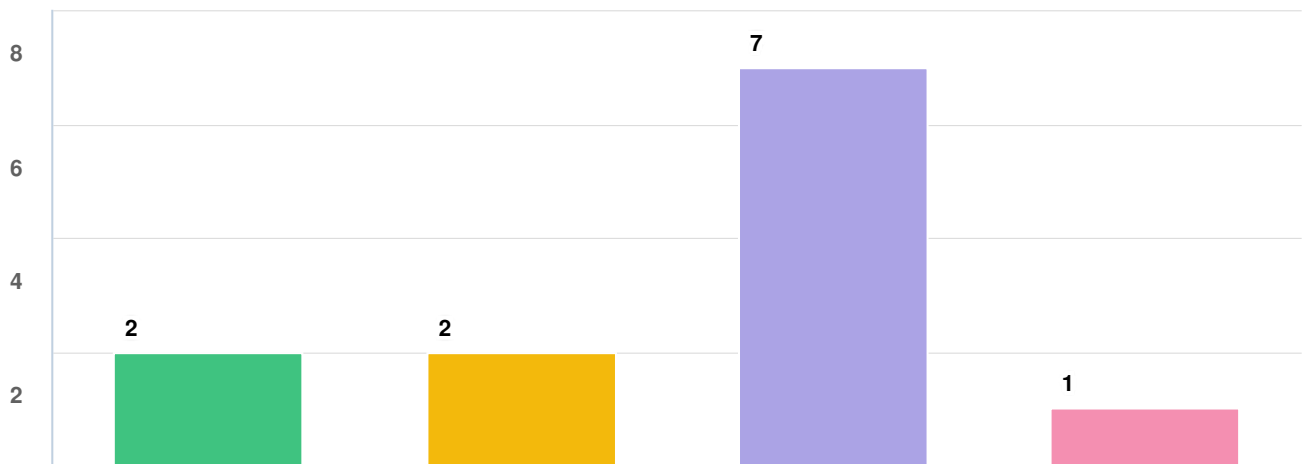


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant
- Not important

Optional question (14 responses, 0 skipped)

Q13 Maximize opportunities for community and recreational amenities.



Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Not important

Optional question (14 responses, 0 skipped)

Q14 | Are there any goals you think should be deleted regarding CONVEYANCE?

peatrlorian

11/30/2018 11:57 AM

Less car focus

Linvann

12/03/2018 09:13 AM

On budget

salty

12/04/2018 10:36 AM

Maximize opportunities to enhance the local economy...

Jennysteel

12/06/2018 09:29 PM

Optional question (3 responses, 11 skipped)

Q15 | Are there any goals missing that you think should be included regarding CONVEYANCE?

Albert Englehart

11/30/2018 10:54 AM

At the very least, all areas in the city of Comox should be connected to the sewer system vice septic. We should not be dumping untreated waste back into the environment if we can help it.

peatrlorian

11/30/2018 11:57 AM

Bike lanes

mary.payne

12/01/2018 09:13 AM

A timeline was not part of the survey

Linvann

12/03/2018 09:13 AM

Progress reports with learnings and recommendations.

Amanda Smith

12/06/2018 08:53 AM

Are you going to use ozone and this system to treat our waste?
<https://www.rdkb.com/Services/EnvironmentalServices2014/LiquidWaste.aspx>

Susan Ruth

12/06/2018 07:24 PM

upgrading the storm water system so that it does not impact the sewage lines.

Jennysteel

12/06/2018 09:29 PM

Should try to reduce the amount and nature of the household effluent coming into the system through public education

Eugene

12/07/2018 04:19 PM

Energy generation potential of the project

ggeiger

12/08/2018 10:02 AM

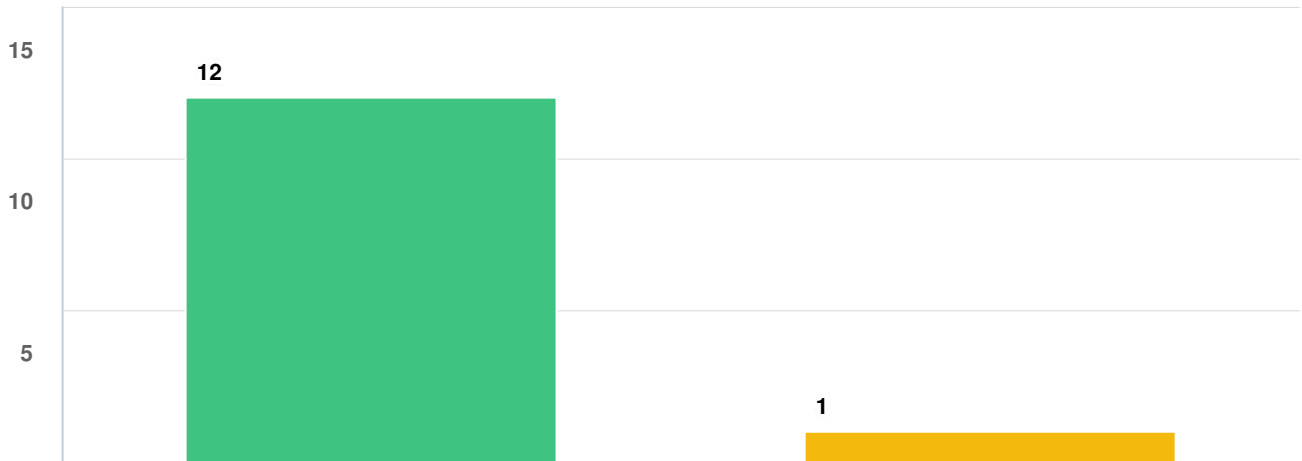
If there is a rural impact or ideas involving rural land , large land owners should be consulted eg. Comox Valley Farmers Institute .As they have a large impact on economy.

Optional question (9 responses, 5 skipped)

TREATMENT

This second series of questions focuses on TREATMENT: How important are these goals to you when it comes to treatment of wastewater (the collection and treatment of all wastewater collected - ensuring it's at a safe standard before discharging into the marine environment)?

Q16 | Ensure infrastructure and operations are resilient to climate change, natural disasters and seasonal impacts.

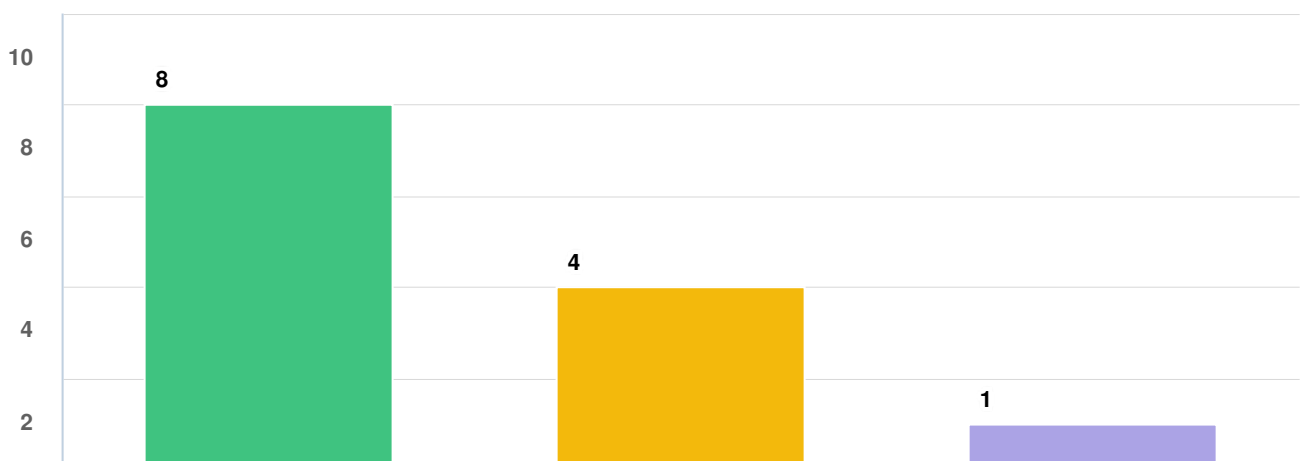


Question options

● Very important ● Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q17 | Ensure operations are able to adapt to changing conditions.

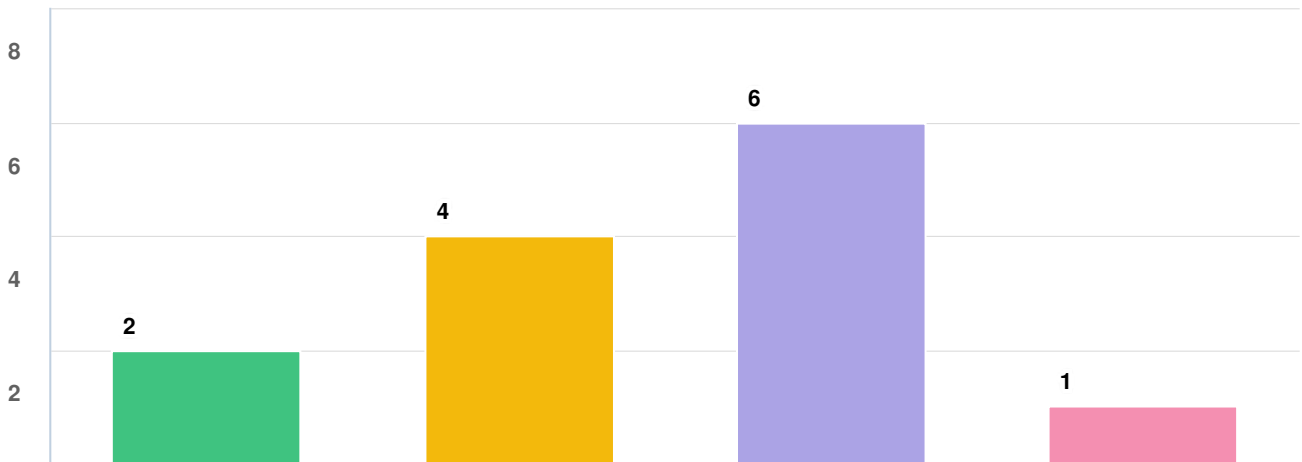


Question options

● Very important ● Somewhat important ● Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q18 Maximize the use of existing infrastructure and road right-of-ways.

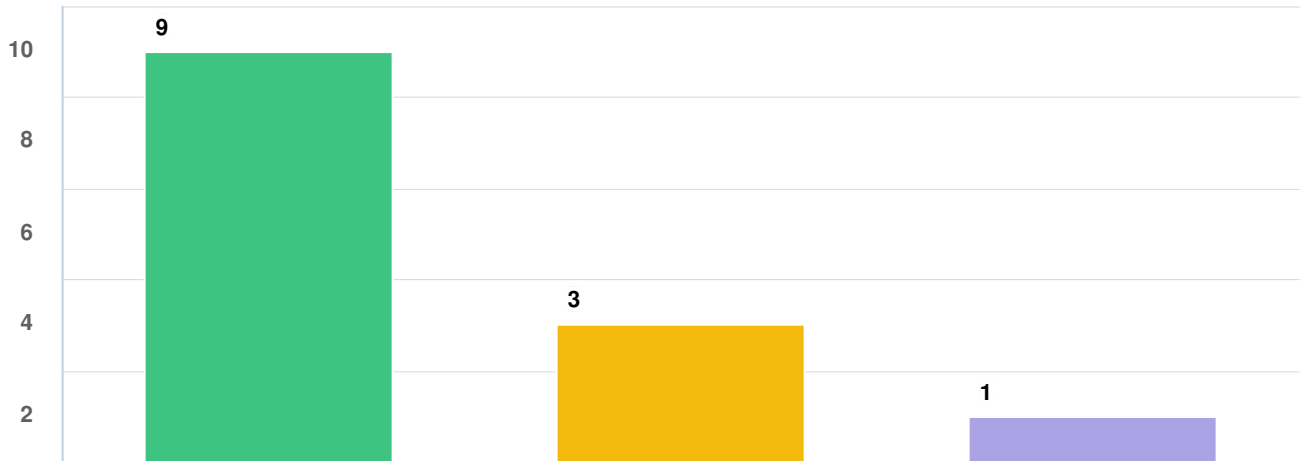


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant

Optional question (14 responses, 0 skipped)

Q19 Ensure assets are relevant for the long term.

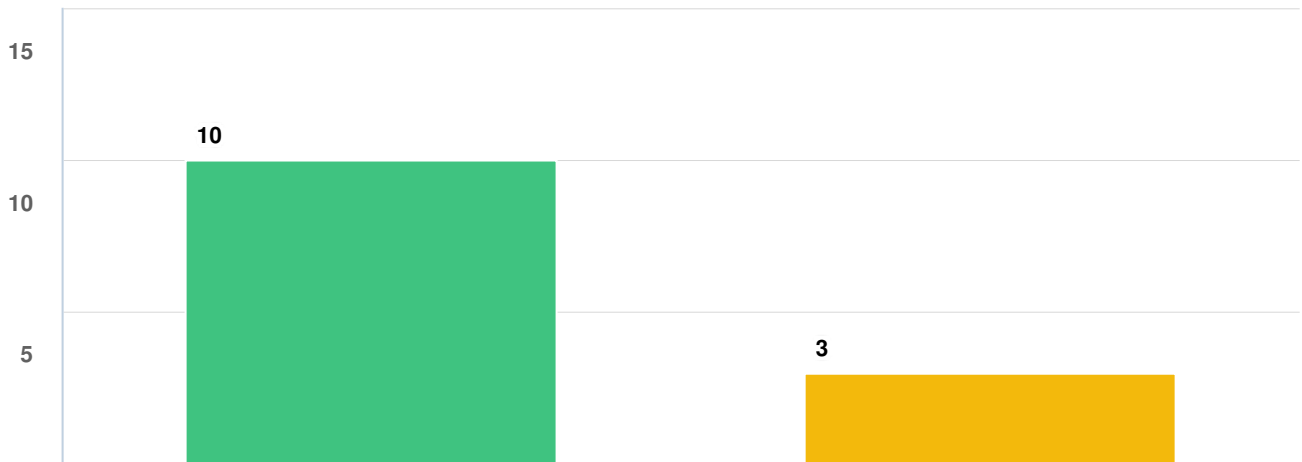


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q20 Ensure the system has enough capacity to meet future growth.

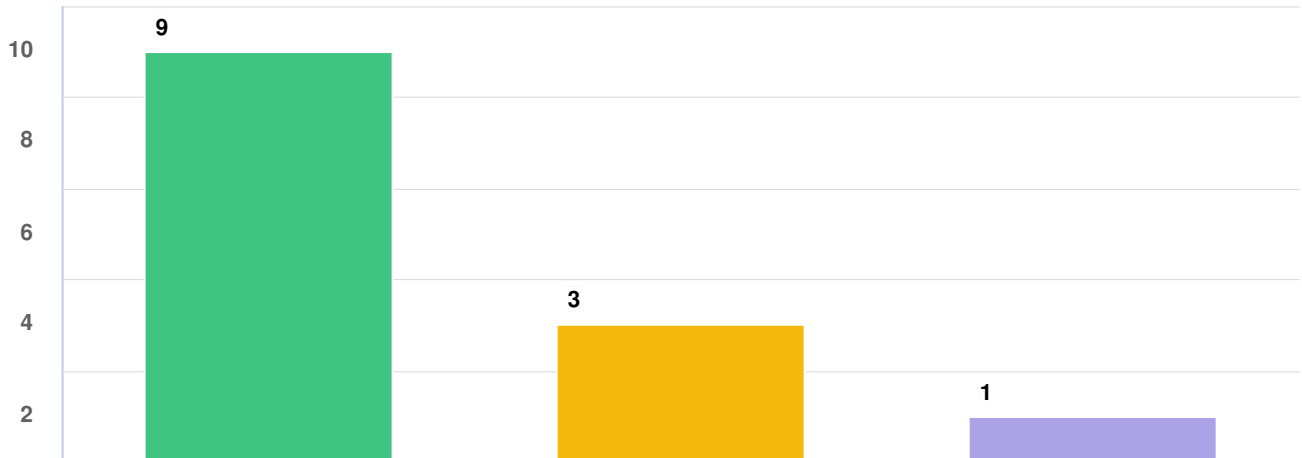


Question options

- Very important
- Somewhat important

Optional question (14 responses, 0 skipped)

Q21 Consider long-term financial impact and minimize life cycle costs.

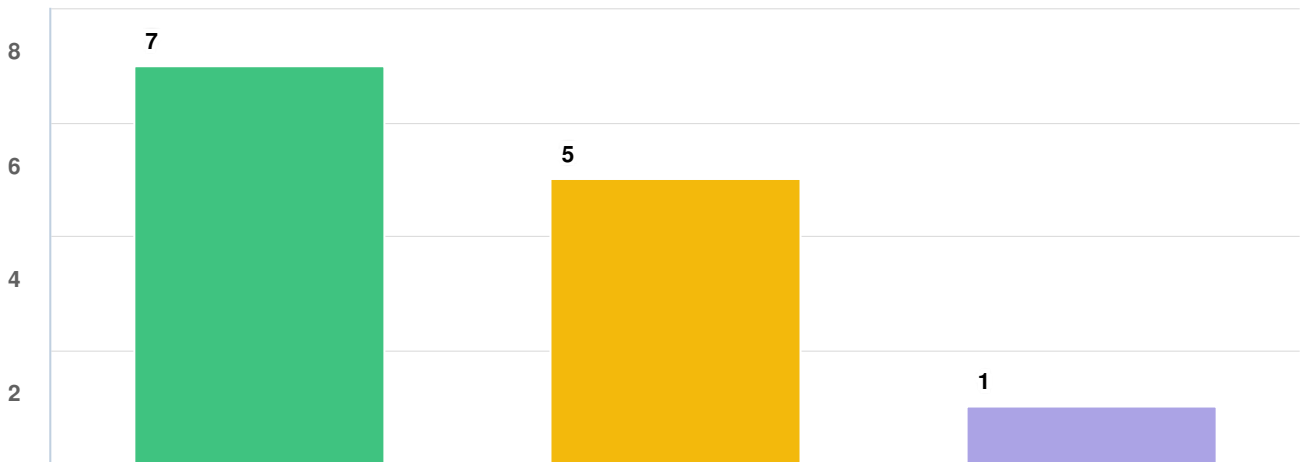


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q22 Maximize opportunity for grant funding.

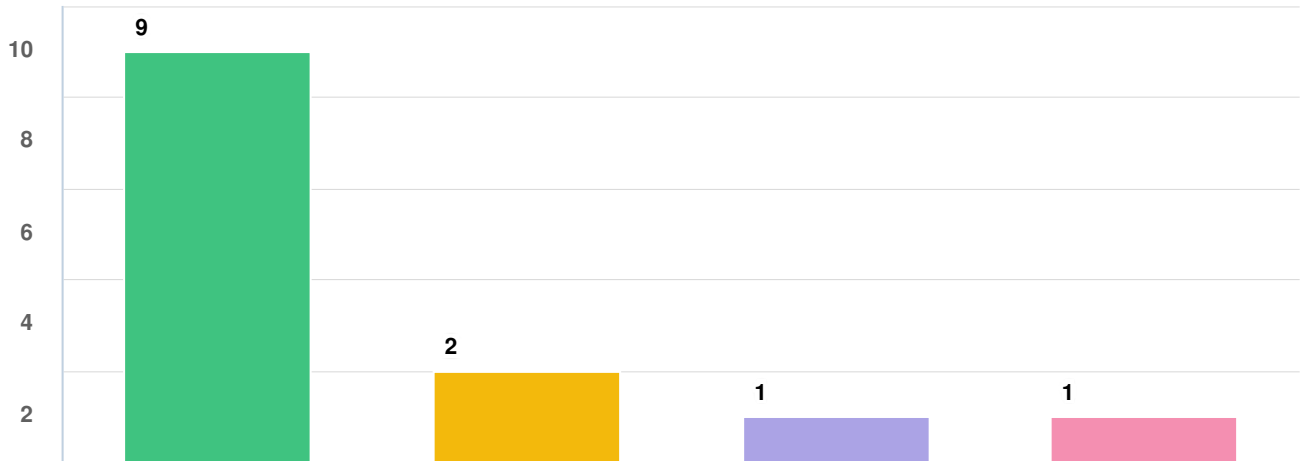


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q23 Ensure treatment of wastewater exceeds current standards.

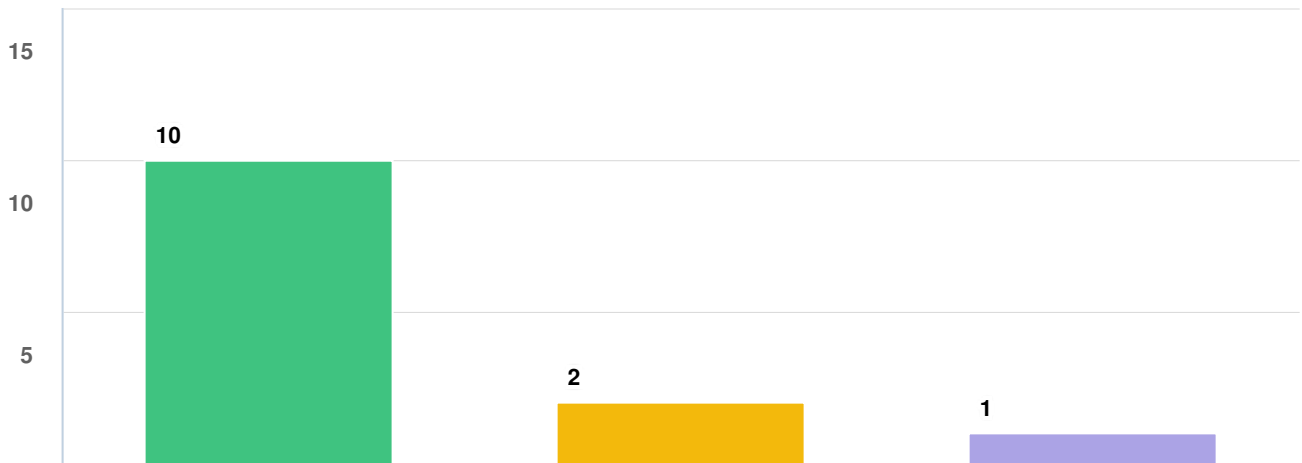


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant

Optional question (14 responses, 0 skipped)

Q24 Remove artificial contaminants such as pharmaceuticals and microplastics from wastewater.

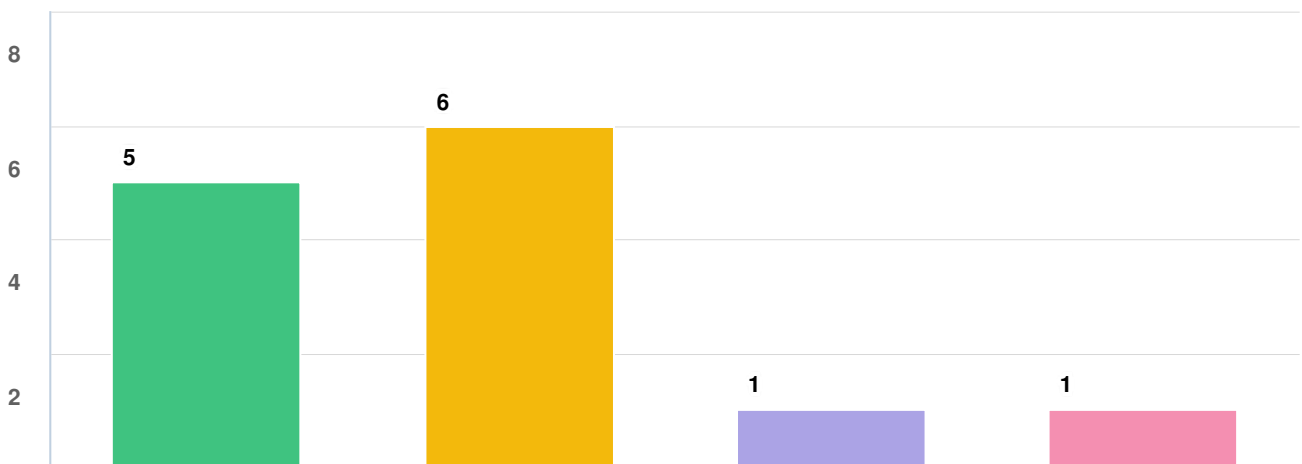


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q25 Maximize energy efficiency and mitigate climate change impacts.

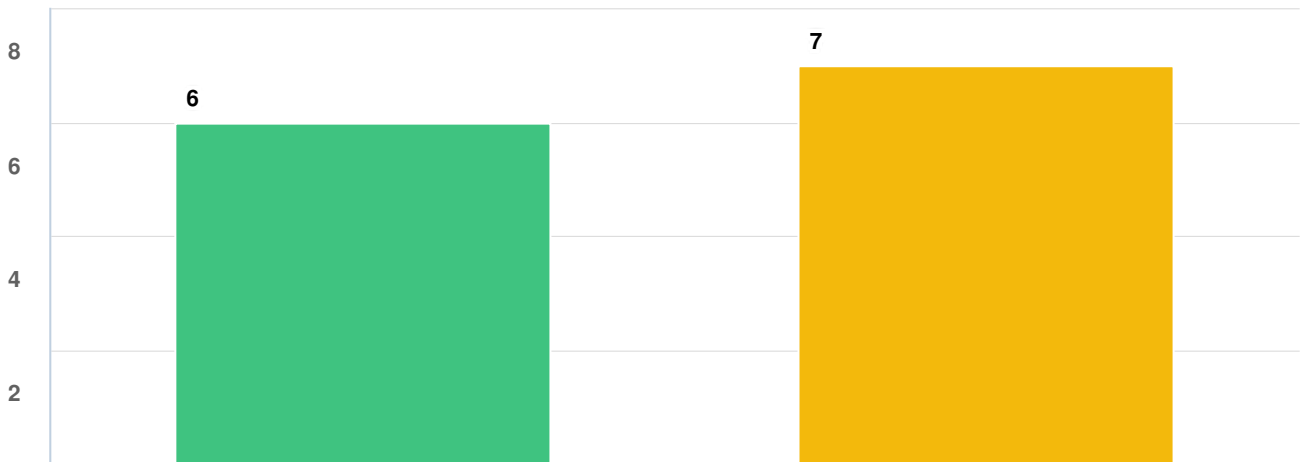


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant

Optional question (14 responses, 0 skipped)

Q26 Minimize noise and odour from treatment plant

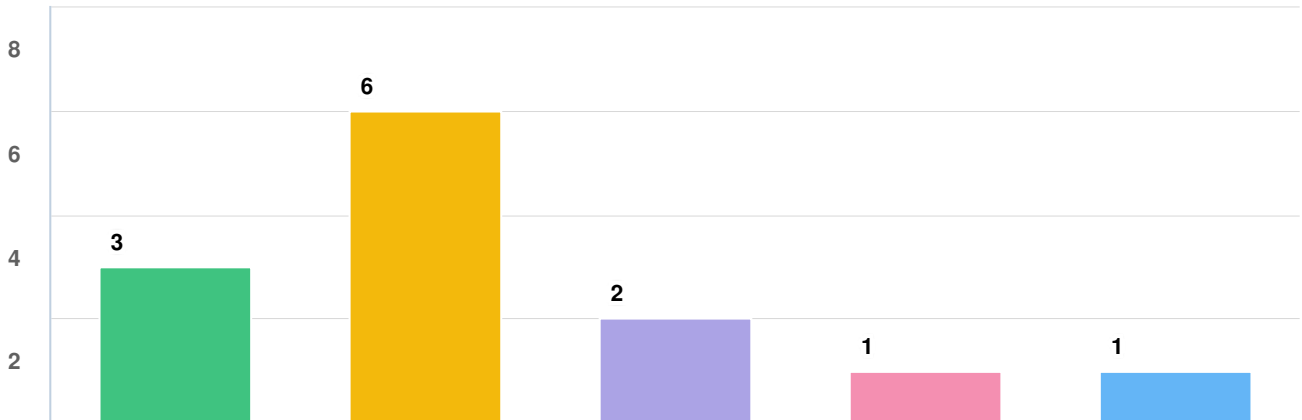


Question options

- Very important
- Somewhat important

Optional question (14 responses, 0 skipped)

Q27 Maximize opportunities for partnerships that achieve a community benefit.

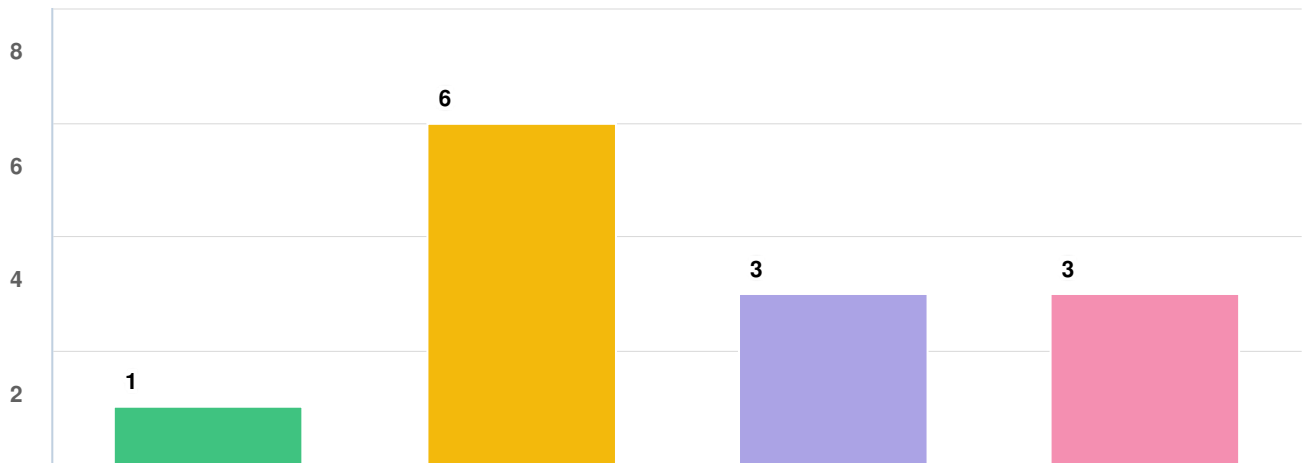


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant
- Not important

Optional question (14 responses, 0 skipped)

Q28 Maximize opportunities for community and recreational amenities at/around the treatment plant.



Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Not important

Optional question (14 responses, 0 skipped)

Q29 | Are there any goals you think should be deleted regarding TREATMENT?

DaveM

11/29/2018 10:27 AM

no

Linvann

12/03/2018 09:13 AM

Cost is the critical factor a goal may be to remove all pharmaceutical but if the cost is exorbitant the goal can not be met.

Poorpi

12/05/2018 06:01 PM

Mitigate climate change should go but energy efficiencies must stay

Susan Ruth

12/06/2018 07:24 PM

if "Maximize opportunities for partnerships that achieve a community benefit " code for public-private partnerships, absolutely not. Thanks.

Jennysteel

12/06/2018 09:29 PM

Minimize odour and noise is NOT acceptable -- they both must be eliminated. CVRD placed its plant in a residential community so there should be no odour or noise beyond the plant boundaries.

ggeiger

12/08/2018 10:02 AM

I dont know what the goals are i can't find them.

Optional question (6 responses, 8 skipped)

Q30 | **Are there any goals missing that you think should be added regarding TREATMENT?**

DaveM

11/29/2018 10:27 AM

no

Albert Englehart

11/30/2018 10:54 AM

Continue to expand the sewer system to include as many residents of the CVRD as possible

mary.payne

12/01/2018 09:13 AM

Timeline

Linvann

12/03/2018 09:13 AM

Reporting and what will be done to dispose of whatever contamination is removed ie what will you do with micro plastics, or chemicals once removed?

Amanda Smith

12/06/2018 08:53 AM

Are you going to use ozone and this system to treat our waste?
<https://www.rdkb.com/Services/EnvironmentalServices2014/LiquidWaste.aspx>

Eugene

12/07/2018 04:19 PM

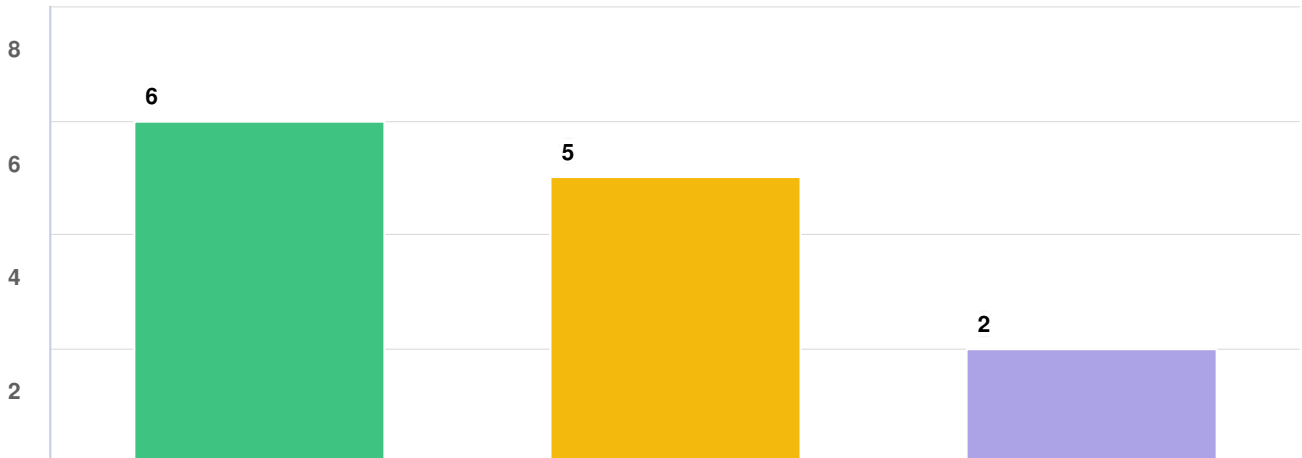
Maximize energy generation potential

Optional question (6 responses, 8 skipped)

RESOURCE RECOVERY

This third series of questions focuses on RESOURCE RECOVERY: How important are these goals to you when it comes to exploring opportunities to recover and reuse resources from wastewater (ie: water, heat/energy/nutrients) rather than releasing/discharging.

Q31 Use commercially available technology.

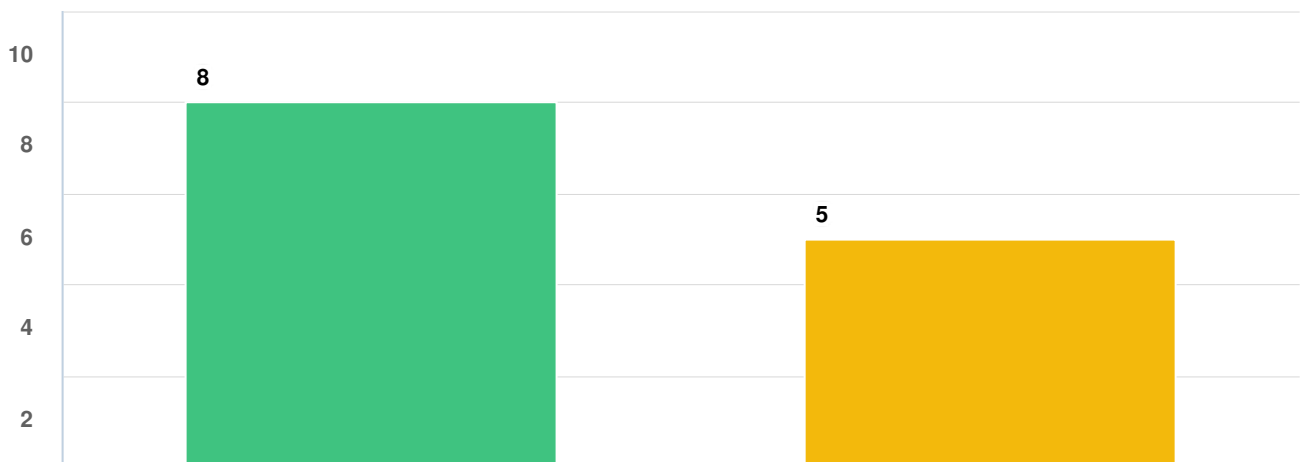


Question options

Very important Somewhat important Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q32 Anticipate future demand for resources

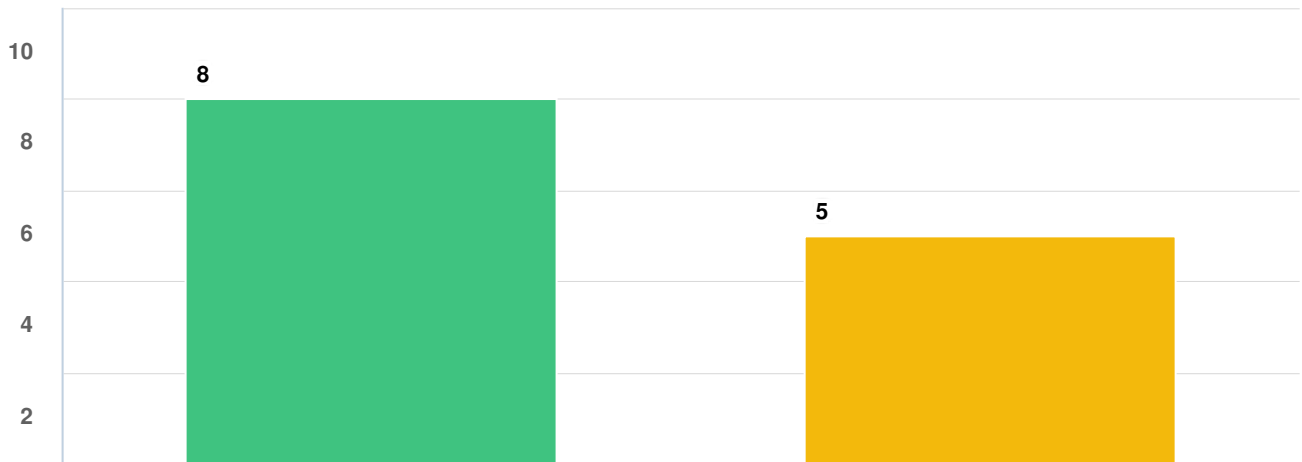


Question options

Very important Somewhat important

Optional question (14 responses, 0 skipped)

Q33 Improve performance of treatment plant.

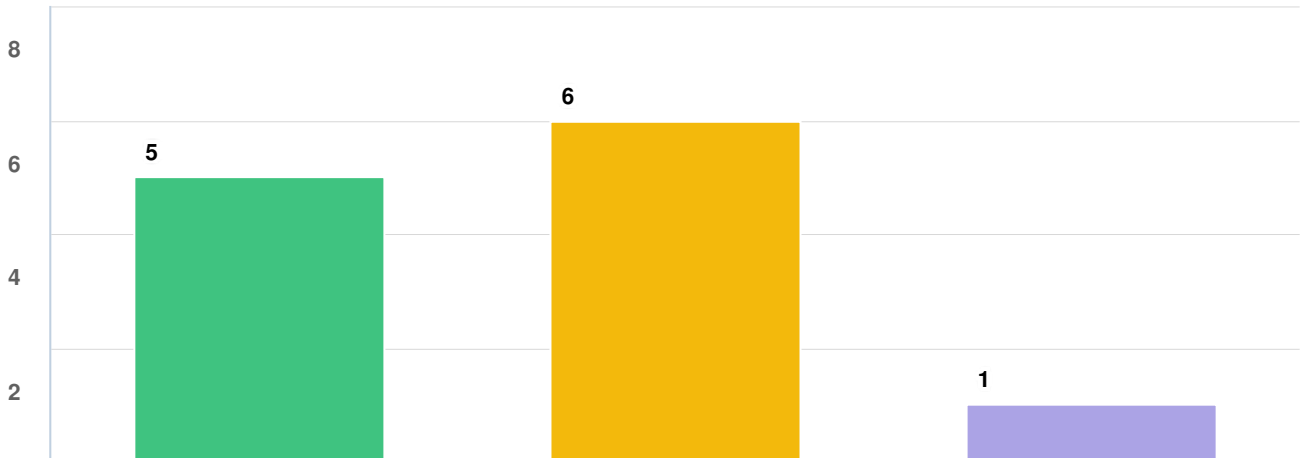


Question options

- Very important
- Somewhat important

Optional question (14 responses, 0 skipped)

Q34 Explore opportunities to recover heat and energy and offset costs at treatment plant.

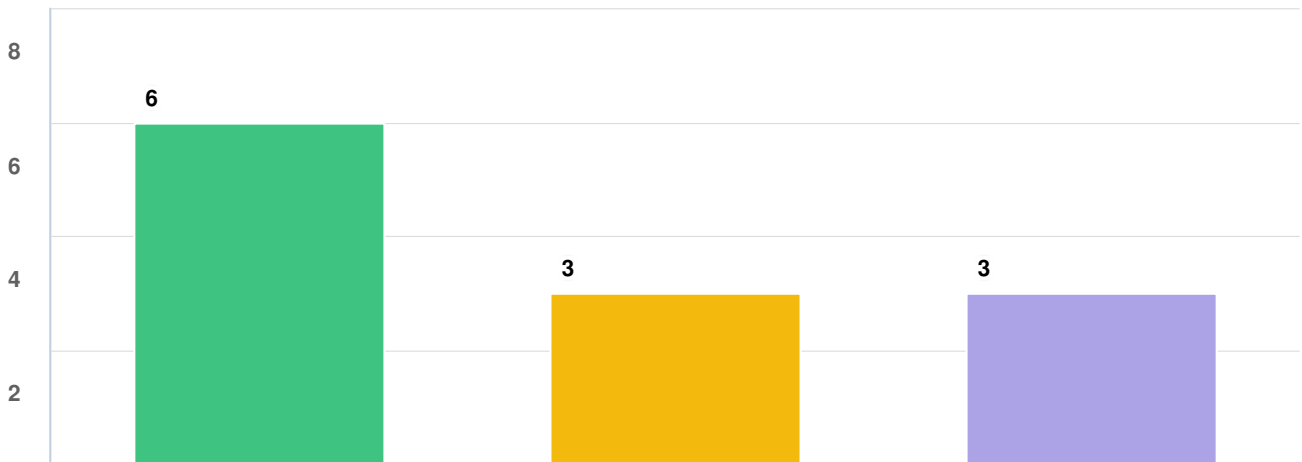


Question options

- Very important
- Somewhat important
- Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q35 Explore economically productive use of reclaimed water.

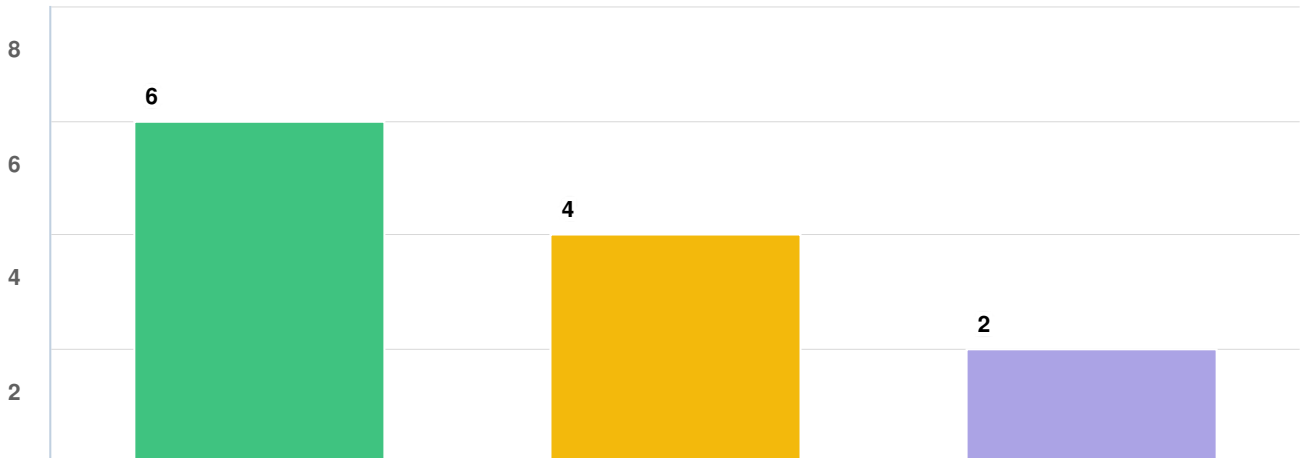


Question options

Very important Somewhat important Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q36 Select resource recovery options that will maximize grant funding opportunities.

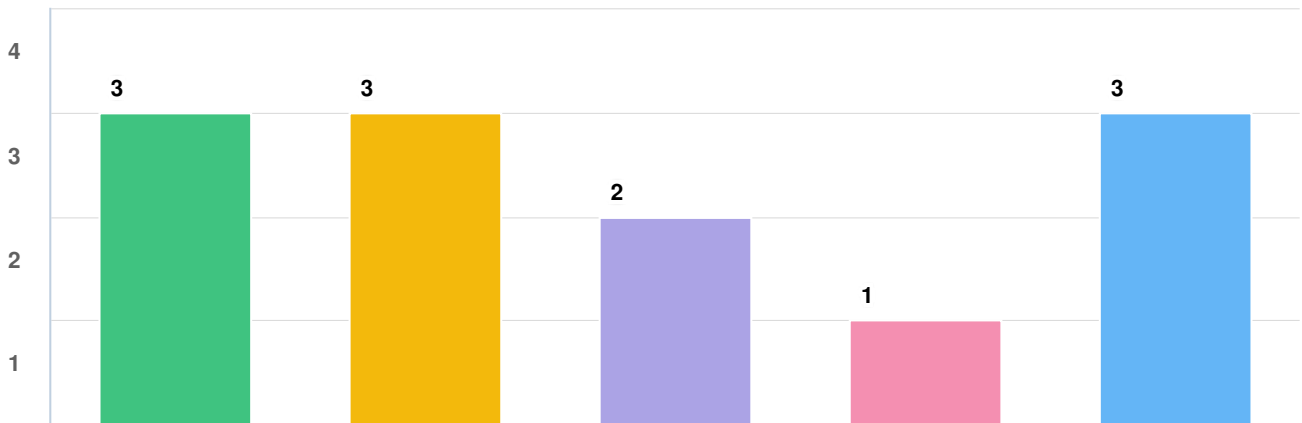


Question options

Very important Somewhat important Neither important or unimportant

Optional question (14 responses, 0 skipped)

Q37 Explore the potential for external partners to help reduce capital costs.

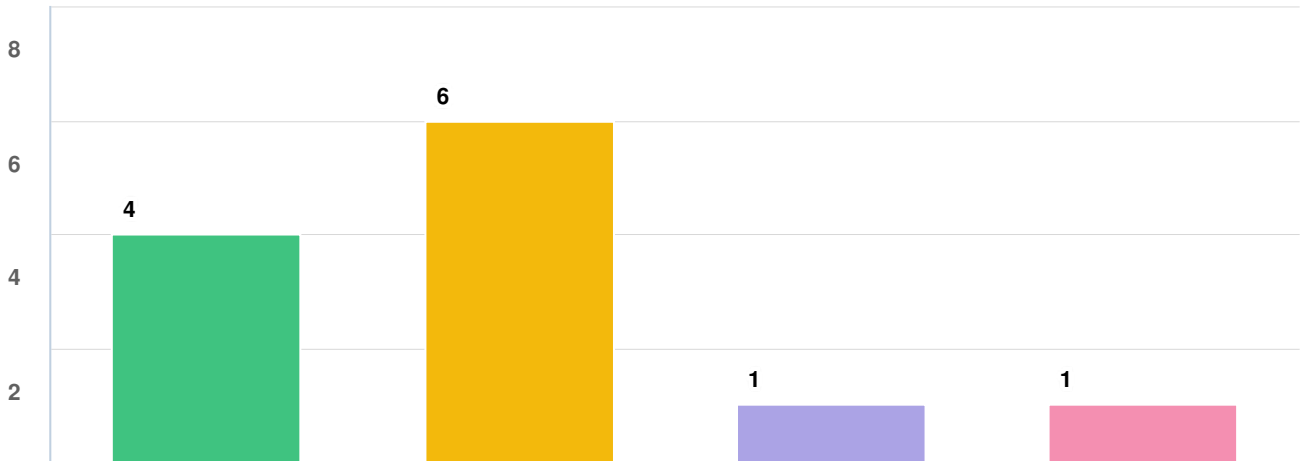


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant
- Not important

Optional question (14 responses, 0 skipped)

Q38 Explore options that can have a positive impact on or grow the local economy.

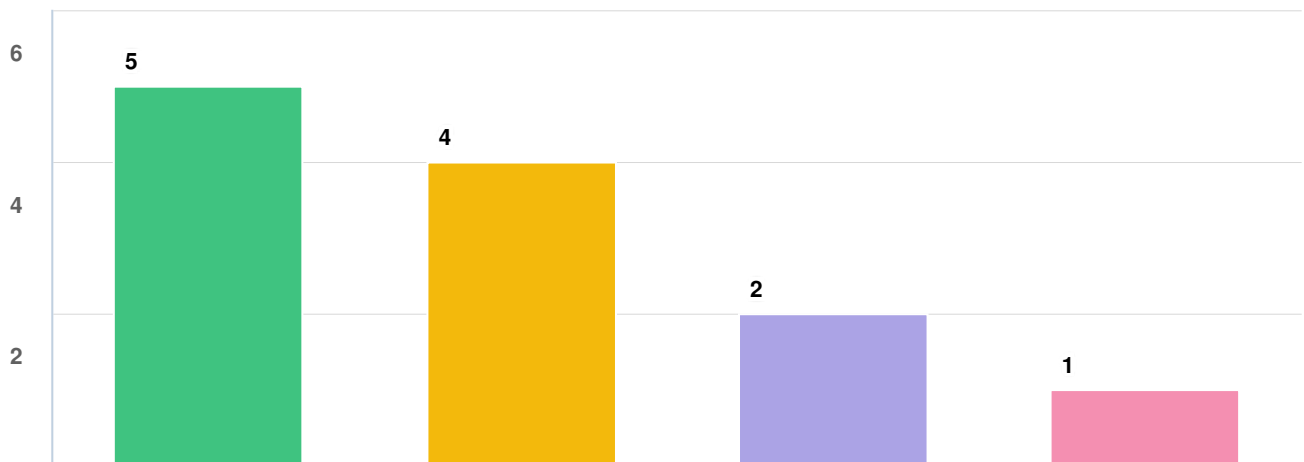


Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant

Optional question (14 responses, 0 skipped)

Q39 Maximize climate change mitigation

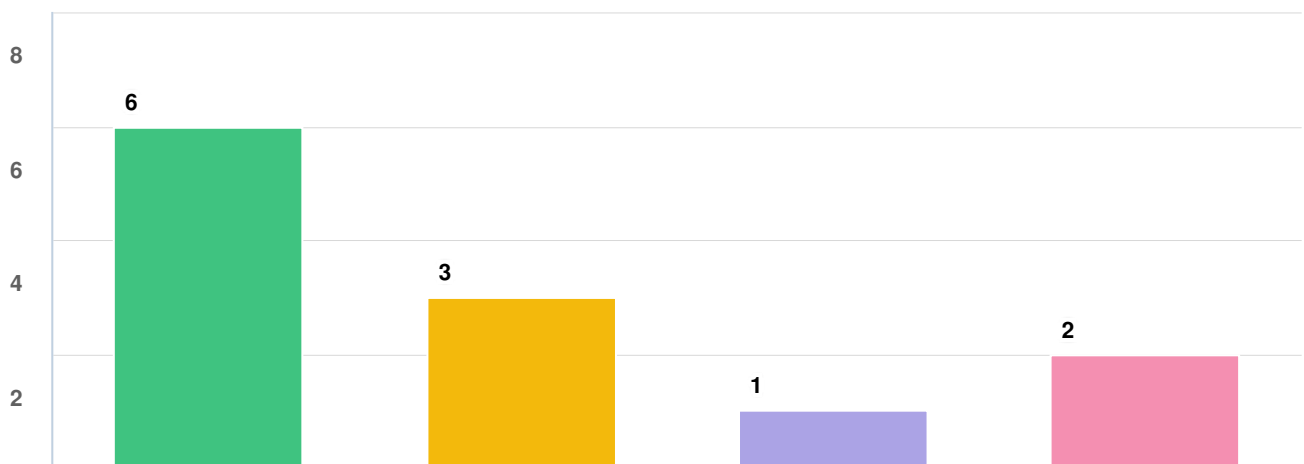


Question options

Very important Somewhat important Neither important or unimportant Not important

Optional question (14 responses, 0 skipped)

Q40 Restore or enhance environmental habitat

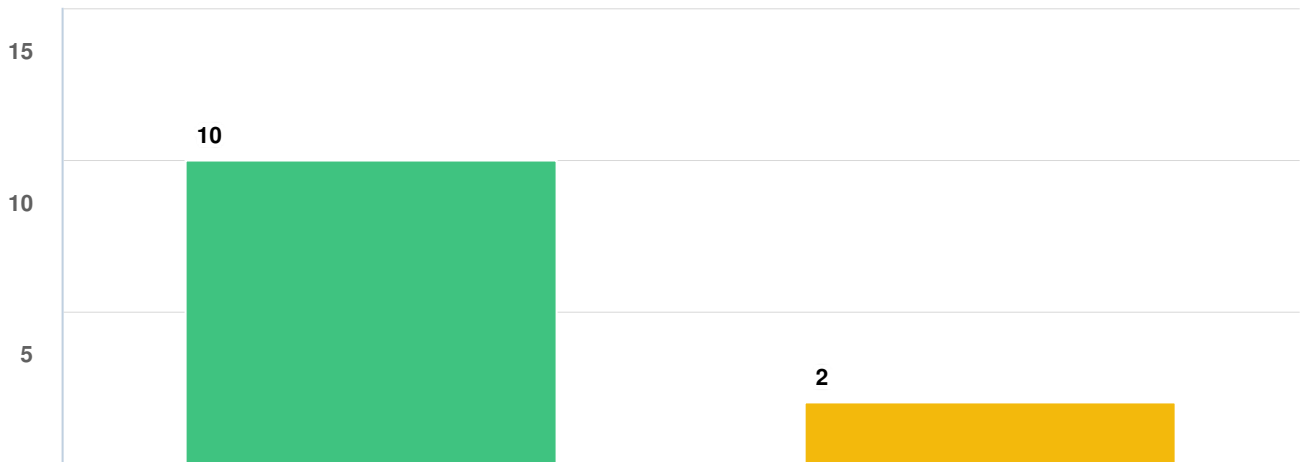


Question options

Very important Somewhat important Neither important or unimportant Not important

Optional question (14 responses, 0 skipped)

Q41 | Protect public health

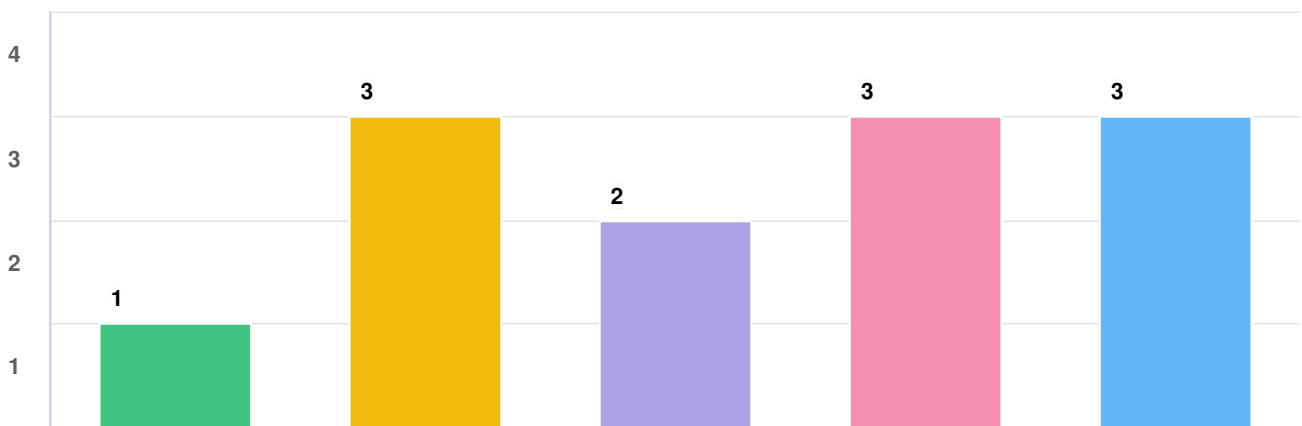


Question options

- Very important
- Somewhat important

Optional question (14 responses, 0 skipped)

Q42 | Ensure ability to maintain irrigation of public parks and gardens during water restrictions.



Question options

- Very important
- Somewhat important
- Neither important or unimportant
- Somewhat unimportant
- Not important

Optional question (14 responses, 0 skipped)

Q43 | Are there any goals missing that you think should be included regarding RESOURCE RECOVERY?

Linvann

12/03/2018 09:13 AM

Check out success of Okotoks Ab water treatment and their objectives for downstream Sheep River. Learn from the best on what is economically achievable.

Poorpi

12/05/2018 06:01 PM

Composting

ggeiger

12/08/2018 10:02 AM

Using treated waste water for irrigation to Local farms

Optional question (3 responses, 11 skipped)

Q44 | Are there any goals you think should be deleted regarding RESOURCE RECOVERY?

Linvann

12/03/2018 09:13 AM

Restore or enhance env habitat. Scope is too big, focus down to what is achievable.

Poorpi

12/05/2018 06:01 PM

Watering parks and gardens, only high cost playing fields should be maintained

Susan Ruth

12/06/2018 07:24 PM

"Maximize opportunities for partnerships that achieve a community benefit." would this mean that the solid waste used for composting would no longer be possible. What is the cost benefit analysis trading one for the other?

Optional question (3 responses, 11 skipped)

Q45 | **Where do you live? (Courtenay/Comox/Electoral Area?)**

Albert Englehart

11/30/2018 10:54 AM

Comox

mary.payne

12/01/2018 09:13 AM

Courtenay

jonmcdon23

12/02/2018 09:07 AM

Courtenay

Linvann

12/03/2018 09:13 AM

Courtenay

salty

12/04/2018 10:36 AM

Area B

Poorpi

12/05/2018 06:01 PM

Courtenay

Amanda Smith

12/06/2018 08:53 AM

Comox

Susan Ruth

12/06/2018 07:24 PM

Electoral area B, north Courtenay

Jennysteel

12/06/2018 09:29 PM

Electoral Area B - Curtis RAoad

ggeiger

12/08/2018 10:02 AM

Courtenay and area c

Optional question (10 responses, 4 skipped)