

AGENDA

FOOD SECURITY & CLIMATE CHANGE COMMITTEE

**THURSDAY, JULY 9, 2015 – 4:30 P.M.
COMMITTEE ROOM AT CITY HALL**

1. ADOPTION OF AGENDA

2. APPROVAL OF MINUTES

Minutes of the June 4, 2015 meeting.

3. FOR DISCUSSION

- a) Review of priority lists from all Board Members**
- b) Feedback on Environmental Sustainability Report**
- c) Rain Harvesting proposal to the ACRD**
- d) Blue Dot Resolution**

4. TOPICS FOR NEXT MEETING (August 6, 2015 meeting cancelled)

5. ADJOURNMENT

FOOD SECURITY AND CLIMATE CHANGE COMMITTEE

THURSDAY, June 4, 2015

4:30 p.m. in the City Hall Committee Room

Present: John Mayba, Chris Alemany, Sam Brownlee, Guy Langlois, Rosalind Chapman
Sandra Gentleman

Regrets: Gary Swann, Bob Haynes

Guest: Heather Shobe

1. **Approval of minutes from May 7 2015**

John Mayba moved to approve, Chris Alemany Seconded

2. **Approval of agenda**

John Mayba moved to approve, Chris Alemany Seconded

3. **Eden Tree presentation on the Alberni Valley Gleaning Project**

Heather Shobe talked to the committee on the status of the Alberni Valley Gleaning Project. She is seeking support from the City for the project.

Motion to refer the request for in-kind support from city staff and request that City Council consider providing \$3,000.00 from the Carbon Fund to the Alberni Valley Gleaning Project.

John Mayba moved the motion, Sandra Gentleman seconded.

4. **Correspondence**

- Discussion regarding the email letter from Jen Fisher Bradley recommending that the City of Port Alberni develop a Food Security Portal on their website to allow local food producers to post what produce they have available for sale.

Chris Alemany recommended that the city develop a Food Security and Climate Change webpage on the City's website and provide a link to the Alberni Valley Transition Towns Webpage.

- Sandra Gentleman recommended that the first and last names of committee members be stated in the minutes on our meetings.

4. **Action Item List**

Priority lists from committee members on food security, climate change and transportation

Guy Langlois

- **Rain Water Harvesting rebate program**

Considering that the Alberni Valley will experience long periods of drought in the summer months, there is an immediate need to explore rain harvesting to ensure that citizens access to water to grow food.

- **Impact of sea level rise on city infrastructure, private property**

Guy Langlois will ask the city engineer what strategies the city is taking to address these issues.

- **Impact of LNG project on climate change**

The committee had a brief discussion on the Steelhead LNG project. The project will contribute to climate change as LNG is a carbon fuel. There was also some concern over the environmental impact on fracking. It was decided that this issue is very political and beyond the scope of the FSCC committee.

5. **New Business**

- Chris Alemany reported on the motion to City Council on the recommendation to NIC to consider offering food production courses at the Port Alberni campus.
- Chris Alemany reported on the motion to grow food in boulevards and flower gardens owned by the City. There was some concern on city council regarding who would be responsible for maintaining these gardens.

Guy Langlois informed the committee that Food Share and the Nanaimo Community Garden Society assumed responsibility in taking care of food crops grown in City of Nanaimo garden beds.

Sandra Gentleman stated that the Young Professionals may want to assume this responsibility.

Janet Cormier of the Young Professionals will be invited to talk to the committee in regards to taking on the responsibility of taking care of food crops grown in City of Port Alberni garden beds.

- Guy Langlois stated that there is a need for an organization to take responsibility for food security in our community. Island Health has been promoting the formation of regional Food Hubs. The AVTTS has received grants within the past few years to work on a food assessment, household food survey, and a food action plan. Guy Langlois questioned if the AVTTS has the capacity to move forward on these issues and commented that there is a need for a local organization to take responsibility for food security in our community. It is difficult for our community to action on food security issues without having a local organization with the capacity move forward on food security. The AVTTS is a volunteer based organization and has resisted building more capacity, e.g. hiring staff or renting office space. Several communities on Vancouver Island have local organizations that have built the capacity to implement food security plans in their communities, e.g. Lush Valley Food Action Society in Courtenay, CR Fair in Victory, Cowichan Green Community in Duncan, Food Share in Nanaimo. The committee discussed contacting Island Health to express our concerns and inquire what financial support is available to local organizations to build capacity to take action on food security issues.

Proposal: To implement a Rainwater Harvesting Rebate Program

Objectives

- To harvest and store rainwater for summer use (for irrigation and livestock consumption).
- To reduce demands on wells and aquifer.
- To increase farm productivity in warm and dry seasons.
- To increase urban agricultural capacity in the Alberni Valley.
- To mitigate the effects of drought during the summer season.
- To reduce peak water use and decrease the urgency of capacity upgrading.

Water Supply Situation

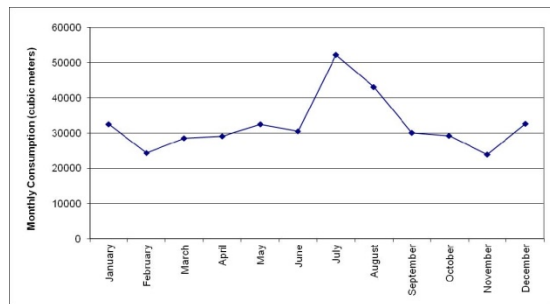
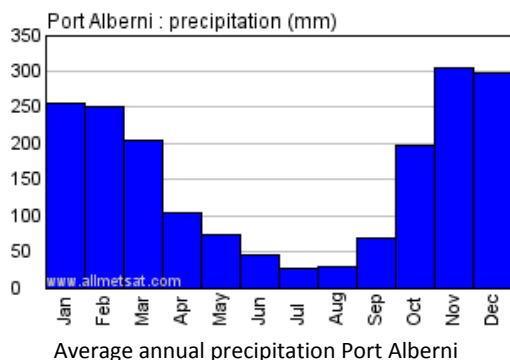
Water restrictions are being instituted almost two months earlier than usual—last year, the city of Port Alberni only implemented stage 1 restrictions on August 1. This year, they started on June 8.

“This is the first time we’ve implemented water restrictions in June,” said city engineer Guy Cicon.

An extremely low snowpack in the surrounding mountains has thrust Vancouver Island into this position. The Island as a whole is only at three per cent of normal snowpack—that’s a 32 per cent drop from this time last year—, according to the B.C. River Forecast Centre.

Katya Slepian - Alberni Valley News - Jun 11, 2015 at 11:00 AM

Rainfall data



Beaver Creek Water Systems 2013 Monthly Consumption

What is Rainwater harvesting?

A rainwater harvesting system collects rainwater that falls on rooftops and stores it in a cistern that is situated either above or below ground near the building.

Rainwater harvesting (RWH) primarily consists of the collection, storage and subsequent use of captured rainwater as either the principal or as a supplementary source of water. Examples exist of systems that provide water for domestic, commercial, institutional and industrial purposes as well as agriculture, livestock, groundwater recharge, reduction of storm water runoff volumes, process water and as an emergency supply for fire-fighting.

The highest cost of any rainwater harvesting system is typically the cistern. This is also the most critical portion of any rainwater harvesting design, as an appropriately sized cistern will ensure that the system will handle the demand placed on it by the users. Storage makes water available when it is needed, and

collects rainwater for later use during rainfall events when the rate of supply exceeds the rate of use. Systems need to be large enough to provide water throughout the year.

Non-Potable Demand

Rainwater can be harvested for the following non-potable water demands:

- Landscape irrigation
- Fire suppression
- Pool/pond filling
- Laundry washing
- Household cleaning
- Toilet flushing
- Commercial fleet washing

What other Communities are Doing

- Regional District of Nanaimo - Rainwater Harvesting Incentive Program

The RDN is offering rebates of up to \$450 for a cistern that is rated for potable use and able to collect a minimum of 4,546 litres (1,000 gallons) of rainwater. In addition, there is up to \$300 available for other eligible collection system expenses such as transport piping, debris traps, filters and installation costs. Distribution components (beyond the tank) are not covered under the rebate. This makes a total of \$750 available per household for the purchase and installation of a rainwater harvesting system. There is only one rebate per household.

- City of Victoria - Rainwater Rewards Program

Low Density Residential (1-4 units)

The City is offering rebates of between \$35 and \$1,500 to assist with the upfront cost of installing rainwater management methods and an ongoing 10% credit off the annual stormwater utility bill.

Apartments, Condominiums, Institutions and Businesses

The City is offering ongoing credits of between 2.5% and 50% off the annual stormwater utility bill. Rebates are not available for these properties, but the credit amounts are larger.

Recommendations

The Food Security and Climate Change Committee recommend that the ACRD implement a Rainwater Harvesting rebate program.

- Rebates up to \$450 for a cistern that is rated for potable use and able to collect a minimum of 4,546 litres (1,000 gallons) of rainwater.
- Rebates up to \$300 available for other eligible collection system expenses such as transport piping, debris traps, filters and installation costs. Distribution components (beyond the tank) are not covered under the rebate.
- This makes a total of \$750 available per household for the purchase and installation of a rainwater harvesting system. There is only one rebate per household. The rebate is available on

a first come, first served basis. Once funds are exhausted, the program will be finished for the fiscal year.

- Public education campaign to promote rainwater harvesting and water conservation.

Resources

Regional District of Nanaimo - Rainwater Harvesting Incentive Program

<http://www.rdn.bc.ca/cms.asp?wpID=2500>

City of Victoria - Rainwater Rewards Program

http://www.victoria.ca/EN/main/departments/engineering/stormwater/rainwater_rewards_program.html

Abbotsford/Mission Water & Sewer Commission (WSC) - Greywater Recycling & Rainwater Harvesting Feasibility Study [https://Abbotsford.Civicweb.Net/Document/25574/WSC%207-](https://Abbotsford.Civicweb.Net/Document/25574/WSC%207-2012.Pdf?Handle=CCB959A6B4E548DA8D832D6D5A2BDB57)

[2012.Pdf?Handle=CCB959A6B4E548DA8D832D6D5A2BDB57](https://Abbotsford.Civicweb.Net/Document/25574/WSC%207-2012.Pdf?Handle=CCB959A6B4E548DA8D832D6D5A2BDB57)

City of City of Guelph - Rainwater Harvesting System Rebate

<http://guelph.ca/living/environment/rebates/rainwater-harvesting-system-rebate>

Alberni Valley Regional Water Study Update

<http://www.acrd.bc.ca/cms/wpattachments/wpID249atID804.pdf>

Rainwater Harvesting Incentive Program - FAQ

Now accepting applications for 2015!

Frequently Asked Questions

- 🔗 [How much money can I get?](#)
- 🔗 [Who is eligible?](#)
- 🔗 [How do I apply?](#)
- 🔗 [Why is the incentive program available in these areas?](#)
- 🔗 [Do I need a Building Permit to install a Rainwater Harvesting System?](#)
- 🔗 [What about the Yellow Point Aquifer Development Permit Area requirements for rainwater collection?](#)
- 🔗 [Why aren't you incenting rain barrels?](#)
- 🔗 [What can 4546L or 1,000 gallons of storage do for me?](#)
- 🔗 [Where do I purchase a cistern?](#)
- 🔗 [What is Rainwater Harvesting?](#)
- 🔗 [Why does the RDN have a Rainwater Harvesting Incentive Program?](#)
- 🔗 [Are other governments doing this?](#)

How much money can I get?

This incentive program rebates up to \$450 for a cistern that is rated for potable use and able to collect a minimum of 4,546 litres (1,000 gallons) of rainwater. In addition, there is up to \$300 available for other eligible collection system expenses such as transport piping, debris traps, filters and installation costs. Distribution components (beyond the tank) are not covered under the rebate. This makes a **total of \$750** available per household for the purchase and installation of a rainwater harvesting system. There is only one rebate per household. The rebate is available on a first come, first served basis. Once funds are exhausted, the program will be finished for this year.

Who is eligible?

This rebate program applies to residential property owners installing or updating a rainwater harvesting system in existing or new homes in the 7 Electoral Areas of the RDN (A,B,C,E,F,G,H) as well as the 4 municipalities (Nanaimo, Lantzville, Parksville, Qualicum Beach). Only property owners are eligible to receive the rebate. Each property is eligible for one (1) rebate over the lifetime of the program.

How do I apply?

1) Applicants must first provide a completed pre-application form describing the system that is going to be installed, including "before" photos of the site (photos may be emailed to watersmart@rdn.bc.ca). Photos should have an indication of scale, such as a person or a meter stick. Pre-approved applicants will have \$750 set aside for them. Upon receiving written approval from the RDN, the applicant will have 4 months to complete the purchase and installation and submit their documents to receive the rebate.



Rainwater Harvesting Best Practices Guidebook

Learn about the design and installation of Rainwater Harvesting Systems - download the guidebook for free! Limited number of hardcopies available from the RDN office and at the VI regional library branches.

The minimum roof collection area in order to be eligible for the rebate is 200 square feet.

[[CLICK HERE](#)] to download the **Step 1: Pre-Approval Application Form**

2) The final document submission must occur within 4 months of the applicant's pre-approval. It must include:

- a sales receipt(s) or invoice marked PAID dated Jan 2015 and onwards, indicating the items applied to the rebate.
- photo(s) of the system installed (photos may be emailed), clearly showing its connection to **1)** an appropriate collection area including downspout and routing to cistern, **2)** overflow diversion according to tank installation checklist specs, **3)** cleaning access & **4)** backflow prevention device (if connected to top-up source).
- The completed Tank Installation Checklist (included in the Document Submission Form).
- Also, if the installation involves the alteration of indoor plumbing or the installation of a new potable water line, a Building Permit is required and a copy of the Building Permit and Inspection Document from the relevant Building Inspection Department must be submitted.

[[CLICK HERE](#)] to download the **Step 2: Document Submission Form & Tank Installation Checklist**

Applications can be mailed to the RDN, dropped off, or faxed to 250-390-1542. The rebate is available on a first-come, first served basis.

Why is the incentive program available in these areas?

All of these areas pay into the Drinking Water and Watershed Protection service and have equal access to the funds available under this program. The funds will be limited once an area/municipality reaches the maximum of 30% of the total program budget.

Do I need a Building Permit to install a Rainwater Harvesting System?

You are required to obtain a Building Permit only if the installation will involve the addition of a new potable water line or alteration to the indoor plumbing.

What about the Yellow Point Aquifer Development Permit Area requirements for rainwater collection?

In 2011 the Yellow Point Aquifer Protection Development Permit Area was included in the Electoral Area 'A' OCP to help protect and conserve water in the vulnerable Yellow Point aquifer. See section 12.9 of the Official Community Plan [here](#). The development permit area establishes conditions to assess the impact development will have on groundwater and ensure water conservation through rainwater collection. Contact the RDN Planning Department for more information: 250-390-6510.

Why aren't you incenting rain barrels?

Rain barrels are relatively inexpensive and are not large enough to collect a sufficient supply of water for the long dry periods that generally exist between summer rain events in the Regional District of Nanaimo.

What can 4546L or 1,000 gallons of storage do for me?

Please contact your local rainwater harvesting consultant or contractor to determine which size of system will best suit your needs. An [online calculator](#) can give you an estimate how much rainwater you can collect with a 1000 imperial gallon tank off of your

roof area. Calculations are also available in a table within the RDN Rainwater Harvesting Best Practices Guidebook, at the top of this page.

Where do I purchase rainwater harvesting system components?

There are several local suppliers and installers, including

- **Rainwater Connection** (Thetis, Gabriola),
- **EMCO** (Nanaimo),
- Living Springs Water Company 250-247-0203 (Gabriola),
- Summer Rain Water Delivery (Gabriola),
- **ABC Water Systems** (Cassidy),
- **Vancouver Island Precast**(Mid Island),
- **Van Isle Water** (Victoria & Courtenay)
- **Arbutus Building Supplies** (Gabriola),
- **RainDropHarvesting** (Nanaimo, Lantzville, Mid-Van Isle),
- Peter Jordison Rainwater Collection Systems and Plumbing 250-668-5833 / peterjordison@gmail.com (Vancouver Island and Gabriola)
- **Water Tiger** (Victoria & Courtenay),
- **Andrew Sheret** (across Vancouver Island),
- **Barr Plastics Inc** (can order online),
- **Jay R. Smith Manufacturing** (purchase at Con-Cur West in Coquitlam, 604-540-5088)
- Aquarian Systems Inc. 250-335-2037 (Mid Van Isle)
- **Clean-Flo Rainwater Management** (online store),
- and cistern cleaning service **CleanCistern.com** (Gabriola & VI).

If you know of, (or own) a business that should be on this list, please email waterprotection@rdn.bc.ca.

The Canadian Association for Rainwater Management (CANARM) is a resource for education and training on Rainwater Harvesting. If interested, please see their website at www.canarm.org

What is Rainwater Harvesting?

Rainwater harvesting (RWH) is the collection and storage of rainwater directed off roofs and buildings to be used at a later time. A rain cistern is much like a rain barrel only it is larger, can be above or below ground, and water from a cistern may be used outdoors for irrigating as well as for indoor use if it is properly constructed with the appropriate treatment and plumbing. Most cistern owners use the water for non-potable applications like irrigation and toilet flushing, as there are additional treatment costs to ensure the water meets drinking water standards. Cisterns for rainwater collection are in use in many areas in BC including Gabriola Island and in the Yellow Point area.

Why does the RDN have a Rainwater Harvesting Incentive Program?

As the population of the Regional District of Nanaimo continues to grow, reducing demand on water resources and water systems will become increasingly important.

Rainwater harvesting reduces stress on local aquifers and rivers, leaving more water available for communities, and environmental needs. By reducing extraction from aquifers and rivers in dry summer months, we help ensure that there is

sufficient water left to maintain critical base flow in streams in order to protect fish and aquatic health. Reducing groundwater extractions can also help reduce salt water intrusion in coastal areas, as excessive pumping of wells along the coast can pull salt water from the ocean into groundwater.

The Drinking Water and Watershed Protection Action Plan identifies the need to promote rainwater harvesting under Program 5C. The RDN Innovative Options and Opportunities for Sustainable Water Use study, evaluates different options for incentive programs and prioritizes them based on their ranking on fifteen criteria. Four of the top five recommended incentives support the use of cisterns for the collection of rainwater.

Prioritized Applications:

1. neighbourhood cisterns/ stormwater (rainwater) detention and centralized reuse;
2. water-saving toilets, showers, laundry, dishwasher;
3. cisterns for toilets and laundry;
4. neighbourhood cisterns and centralized irrigation reuse; and
5. cisterns for outdoor watering

Are other governments doing this?

Many local governments across Canada have implemented incentive programs offering rebates on rainwater collection devices. Several local governments provide incentives for the use of rain barrels. There is a great interest by Canadian municipalities in the area of rain harvesting and several other local governments including Comox Valley Regional District and the City of Guelph provide rebates of \$150 to \$2,000 for purchase and installation of cisterns or full RWH systems.

If you have any additional questions, please call 250-390-6560 or email watersmart@rdn.bc.ca



What you can do to manage rainwater sustainably:

Looking to resurface your driveway?

- ◆ Consider permeable paving options

Starting a landscaping project?

- ◆ Consider a rain garden

Have a large garden and a big water bill in the summer?

- ◆ A cistern could help reduce your water costs

Have a small yard but would like to collect some rainwater?

- ◆ A rain barrel might be a good fit.

Rainwater Rewards

75% of all properties in Victoria are low density residential (1–4 units), so what we all do at home makes a difference.

Rainwater Rewards have been designed to encourage property owners to consider rainwater management methods when undertaking other improvements.

Rainwater Rewards for low density residential properties have two parts:

- ◆ **One-time Rebates:** Help with the upfront installation costs and are the focus of the Rainwater Rewards program for low density residential properties.
- ◆ **Annual Credits:** If you have installed one or more rainwater management method, you can apply for 10% off your annual stormwater utility bill.

If you have already installed rainwater management methods, you can apply for annual credits, but not rebates.

Applying for Rainwater Rewards

Doing work on your property?

Find out if a rainwater management method will work for your property:

- ◆ Visit victoria.ca/stormwater to learn more. Try using the Rainwater Management Planning Tool to map out your options.
- ◆ View the checklist to determine if the “Do-it-Yourself” approach is appropriate for your property.
- ◆ Talk to a professional if desired or required.

Ready to Move Forward?

- ◆ Work with the City’s stormwater specialist and/or your professional to develop a plan that will qualify for the Rainwater Rewards program.
- ◆ Submit the site plan to City Hall for pre-approval.
- ◆ Once approval is received, work can start.
- ◆ The stormwater specialist can help coordinate any required inspections.
- ◆ Once work is complete and final approval has been granted, the credit will be applied to your account and a rebate cheque will be sent to you.
- ◆ Sit back and enjoy the rain!

Thank you for helping us steward the rain that falls in Victoria each year!

If you have any questions or concerns throughout the process, please contact the stormwater specialist:

250.361.0443 or stormwater@victoria.ca



Rainwater Rewards For Your Home



Learn:

- ◆ About the benefits of rainwater management: rain gardens, rain barrels, cisterns, permeable paving and more.
- ◆ How to manage rainwater more sustainably on your property.
- ◆ How to apply for Rainwater Rewards:
 - Rebates: to help with upfront installation costs.
 - Credits: on-going reductions off your annual stormwater utility bill.



Why manage rainwater?

Rainwater management is about reintroducing the natural water cycle into our urban environment.

We can all slow and clean the run-off from our homes by helping the rain soak into our soil, just like it does in natural landscapes.

Managing rainwater more sustainably will assist in reducing flooding. It will also clean the stormwater, helping to clean and preserve our waterways and beaches.



Consider these approved rainwater management methods.



Rain Barrels

A rain barrel is a specialized container, connected to the downspout from a building.

Sizing: Minimum 350 litres (smaller units can be combined)

Approximate Cost: \$350

Rebate: \$35 – \$100

Credit: Not available

Ease of Installation: Easy

What it does: Collection and use of rainwater



Cisterns

Cisterns or holding tanks collect rainwater and are larger than rain barrels. They can be elevated, placed at ground level or buried underground. The non-potable water can be used for irrigation or to flush toilets.

Sizing: Minimum 1,200 litres, must treat 25 m² (270 sq. ft.) of roof

Approximate Cost: from \$1,200

Rebate: \$180 – \$600

Credit: 10% off annual stormwater utility bill

Ease of Installation: Moderate

What it does: Collection and use of rainwater



Rain Gardens

A rain garden is a shallow depression that uses soil and plants to manage run-off from roofs, roads and driveways. You can improve the look of your home and help slow and clean runoff by incorporating rain gardens into your yard.

Sizing: Must treat at least 25 m² (270 sq. ft.) of roof or other hard surfaces

Approximate Cost: From \$1,000

Rebate: \$375 – \$1,000

Credit: 10% off annual stormwater utility bill

Ease of Installation: Moderate

What it does: Slows, cleans and absorbs stormwater



Infiltration Chambers

Infiltration chambers are underground tanks or pipes with small holes that are designed to slowly release water through the ground and into the water table over time.

Sizing: Must treat at least 25 m² (270 sq. ft.) of roof or other hard surfaces

Approximate Cost: From \$2,000

Rebate: \$375 – \$1,000

Credit: 10% off annual stormwater utility bill

Ease of Installation: Moderate/Difficult

What it does: Slows, cleans and absorbs stormwater



Permeable Paving

Permeable paving can be used instead of asphalt or concrete for sidewalks, driveways, patios or parking areas. It can improve water quality by slowing runoff and filtering out pollutants that would otherwise enter our local waterways.

Permeable Paving – Without an underdrain

Sizing: Minimum 10 m² (110 sq. ft.) of permeable paving

Approximate Cost: From \$3,000

Rebate: \$200 – \$750

Credit: 10% off annual stormwater utility bill

Ease of Installation: Moderate/Difficult

What it does: Slows, cleans and absorbs stormwater

Permeable Paving – With an underdrain

Installing an underdrain enables your permeable paving to treat additional runoff from your roof or other hard areas. Piping and an infiltration trench are required.

Sizing: Must treat runoff from at least 25 m² (270 sq. ft.) of roof or other hard surfaces.

Approximate Cost: From \$5,000

Rebate: \$750 – \$1,500

Credit: 10% off annual stormwater utility bill

Ease of Installation: Difficult

What it does: Slows, cleans and absorbs stormwater



Bioswales

Bioswales are sloped channels that function like rain gardens. They also convey water across a site. They must be completed by a professional.

Sizing: Must treat at least 25 m² (270 sq. ft.) of roof

Approximate Cost: From \$1,500

Rebate: \$375 – \$1,000

Credit: 10% off annual stormwater utility bill

Ease of Installation: Moderate/Difficult

What it does: Slows, cleans, redirects and absorbs stormwater

Do-It-Yourself

The City has developed “DIY” standards for low density homes with 1–4 units. They take you through the steps of planning, installing and maintaining a rainwater management method. The standards are available on the website and must be followed if applying for Rainwater Rewards.

To see if your project is suitable for “DIY”, please review the short checklist at victoria.ca/stormwater. If preferred or required, you can work with a professional.

City of Victoria



Rainwater Rewards Program

- Rain Gardens in Victoria



Sustainable Rainwater Management Practices

Rainwater management looks at how we can work to maintain or restore natural water cycles and use rainwater as the resource that it is. The goal is to design rain gardens, green roofs, bio-swales and other similar methods that work to slow and clean the rainwater, either capturing it for use in landscaping or within buildings or slowly diffusing it back to the natural water table.

The City of Victoria has started to include rain gardens, green roofs and permeable paving in some projects throughout the community. For example, Fisherman's Wharf Park in James Bay is now home to Victoria's largest rain garden. [Click here to learn more about projects that are underway in Victoria.](#)

Rainwater Rewards Program

The City of Victoria has developed an incentive program for properties that manage rainwater sustainably. Applications for the Rainwater Rewards program are now open.

Property owners in Victoria who want to manage rainwater more sustainably, may be eligible for the Rainwater Rewards program. There are two programs, depending on the property type.

Low Density Residential (1-4 units)

- The City is offering rebates of between \$35 and \$1,500 to assist with the upfront cost of installing rainwater management methods and an ongoing 10% credit off the annual stormwater utility bill.
- Approved Rainwater Management Methods:
 - Rain barrels
 - Cisterns
 - Rain gardens
 - Infiltration chambers
 - Permeable paving
 - Bioswales
- Learn more about the Rainwater Rewards Program for low density properties: Rainwater Rewards for Your Home.pdf [PDF - 262 KB]
- DIY Rainwater Management Standards have been developed for all of the above, with the exception of bioswales which must be completed by a professional. They are available here and must be followed when applying for Rainwater Rewards: Rainwater Management Standards - DIY For Your Home May 2015 Edition.pdf [PDF - 1.2 MB]
- After you have read the Rainwater Management Standards you can apply for the Rainwater Rewards program with this form. Please submit your application before you begin work on your property. If you have completed work prior to May 2015, you can apply for annual credits off your stormwater utility bill, but not rebates. Please complete this form: Rainwater Rewards Application Form Low Density Residential (1-4 units). [PDF - 1.2 MB]

Apartments, Condominiums, Institutions and Businesses

- The City is offering ongoing credits of between 2.5% and 50% off the annual stormwater utility bill. Rebates are not available for these properties, but the credit amounts are larger.
- Approved Rainwater Management Methods:
 - Cisterns
 - Rain gardens
 - Infiltration chambers
 - Permeable paving
 - Bioswales
 - Green roofs
 - Education (for businesses and institutions only)
- Learn more about the Rainwater Rewards Program for apartments, condominiums, institutions and businesses: Rainwater Rewards for Your Apartment, Condo, Institution or Business.pdf [PDF - 257 KB [PDF - 1.2 MB]]
- Rainwater Management Standards for Professionals apply to properties in this category. All rainwater management methods for these property types must be done by a professional. These standards must be followed when applying for Rainwater Rewards. (The Rainwater Management Standards for Professionals will

be posted here by May 22.)

- If you have installed rainwater management methods on your property prior to May 1 2015, you may also be eligible for a credit. Please submit the details of the work completed with this form: Rainwater Rewards Application Form for Apartments, Condominiums, Institutions and Businesses.pdf [PDF - 1.1 MB] (Please note this form is currently under construction and is not fillable online at this time. As an interim measure you can print this form, fill it in, scan it and email it back to stormwater@victoria.ca. The fillable version of the this form will be live again soon. Thank you for your patience as we improve this form.)
- If you are considering new rainwater management methods for your property, please wait until the 'Rainwater Management Standards for Professionals' is posted here. After reviewing these details, you can then submit the above 'Rainwater Rewards Application Form for Apartments, Condominiums, Institutions and Businesses'. Thank you for your patience, these standards are coming soon!

Rainwater Management Online Tool

An online tool is being developed to help property owners with preliminary planning for one or more rainwater management methods. (This tool is coming soon.)

Rainwater Management Methods

The following rainwater management methods are part of the Rainwater Rewards program. Please refer to the list above regarding which rainwater management methods are accepted for your property type. Before you choose a method for your property please read the design standards that have been designed for your property type.

Rain Barrels and Cisterns



Rain barrels and cisterns can be used to collect rainwater for reuse. The larger your system is, the more water will be kept out of the stormwater system. In Victoria, most of the rain falls in the spring and autumn, but the watering needs are highest in the summer so it is beneficial to have a larger storage capacity. The collected non-potable water can be used to water gardens and lawns or indoors in toilets and urinals.

Rain Barrels: A rain barrel is a specialized container, connected to the downspout from a building, that is designed to collect and store rainwater for reuse.

Cisterns: Cisterns or holding tanks collect rainwater and have a larger storage capacity than rain barrels. They can be elevated, placed at ground level or buried underground. A dispersal or irrigation system will allow for the reuse of this water.

Infiltration Chambers

Infiltration chambers are underground tanks or pipes with small holes that are designed to slowly release water into the ground over time. They primarily act to slowly return rainwater to the natural water table. This water is not reused. They can be designed to help clean the water as well.



Permeable Paving



Permeable paving is hard surfacing that allows rain to flow through the surface and into the soil below. Permeable paving can be used instead of standard asphalt and concrete for surfacing sidewalks, driveways, or parking areas. It can add character to your site while maintaining access and durability for vehicles and foot traffic. It can improve water quality by slowing runoff and breaking down pollutants that would otherwise enter our local waterways.

For areas that require paving there are a variety of permeable options, including:

- paving blocks, cobble stones, or interlocking concrete pavers
- concrete, plastic or fibrous grid systems filled with sand, gravel or plants
- specialty mixes of permeable concrete and asphalt

- grass strips in the middle of a driveway (driveway planting strips)

Rain Gardens



A rain garden is a shallow depression that uses soil and plants to manage runoff from hard areas such as roofs, roads and driveways. The plants and a layer of absorbent compost can hold several inches of rainwater and allow the stormwater to slowly seep into the ground. You can improve the look of your home and help the environment by incorporating rain gardens into your yard.

Rain gardens mimic nature by collecting, absorbing and filtering stormwater runoff.

The first inch of rainfall, also known as the first flush, is responsible for most of the pollutants in stormwater runoff. A rain garden is designed to temporarily hold this first flush and naturally filter out many of the common pollutants in the stormwater, such as oil or chemicals.

Read more about what a rain garden is, and where you can find them in the City of Victoria here. Here is a fact sheet about Rain Gardens in

Victoria.

Bioswales



Bioswales are sloped channels that are designed to clean and slow down the rain and runoff coming from an area. There are a number of different types of bioswales, including grassed channels, dry swales and wet swales. They often use native plants or plants that are drought resistant and are also able to handle large amounts of water.

Green Roofs



A green roof is a specially designed garden that has been planted on top of a waterproof membrane on your roof. Green roofs clean and slow rainwater, while also absorbing some of the flow before it enters the stormwater system. They also provide insulation which can reduce heating costs.

Green roofs are classified into two categories:

- extensive green roofs have a shallow soil profile of 100 mm (4") to 150 mm (6") and support mosses, grasses and sedums;
- intensive green roofs with soil depths greater than 150 mm (6") are able to support shrubs, trees, vegetables, etc. Increasing the depth of absorbent soil increases the retention capacity.

Education



Education about rainwater management practices is important so that more and more people understand the importance of it.

Please note...The Rebate Program is limited to a maximum of \$75,000 per year. If applications are received in excess of this amount, they will be considered in the following year. Even though billing and ongoing credits for the Stormwater Utility will not commence until 2016, rebates will be issued to applicants after an application is approved, construction is completed and final documentation is submitted and accepted.

The City of Victoria Stormwater Specialist is available to help as you map out the method that might be suited best to your property and to help guide you through the Rainwater Rewards application process. Please email stormwater@victoria.ca with any questions or call 250.361.0443.

Although the City of Victoria tries to ensure the accuracy of all information here, you should confirm all information.

DRAFT DECLARATION THE RIGHT TO A HEALTHY ENVIRONMENT

Whereas the City of Port Alberni understands that people are part of the environment and that a healthy environment is inextricably linked to the well-being of our community;

Whereas the City of Port Alberni recognizes the mutual importance and interconnectedness of a healthy environment, a strong economy and a healthy society as we move toward sustainability;

Whereas the City of Port Alberni recognizes that environmental protection is a fundamental value held by its citizens;

Whereas the City of Port Alberni recognizes that our world and all of its inhabitants are faced with the growing and increasingly urgent impacts of climate change, air and water pollution, and loss of biodiversity;

Whereas the City of Port Alberni recognizes the importance of protecting citizens' health from environmental hazards such as air pollution, contaminated food and water, and toxic chemicals;

Whereas the City of Port Alberni has a structured sphere of influence and a defined jurisdiction;

Whereas in proclaiming this declaration, Council is articulating public policy principles but not creating or guaranteeing any legal rights or obligations;

Whereas the City of Port Alberni supports the recognition of the right to a healthy environment in the Canadian Charter of Rights and Freedoms;

Whereas the City of Port Alberni, through the Official Community Plan and its policies, reflects the values of its citizens and demonstrates a commitment to protecting the environment and moving toward a more sustainable future;

Now therefore the Council of City of Port Alberni declares that:

1. Council believes that all people have the right to live in a healthy environment, including the right to:
 - breathe clean air;
 - drink and access clean water;
 - eat safe and healthy food;
 - access nature;
 - know about pollutants and contaminants released into the local environment; and
 - participate in decision-making that will affect the environment.
2. Within its jurisdiction, the City of Port Alberni has certain authority to respect, protect, fulfill and promote these rights and commits to encouraging the respect, protection, fulfillment and promotion of these rights.
3. The City of Port Alberni will apply the precautionary principle: where threats of serious or irreversible damage to human health or the environment exist, the City of Port Alberni will consider measures within its jurisdiction and authority to prevent such degradation of the environment and protect the health of its citizens; and lack of full scientific certainty will not be viewed as sufficient reason for the City of Port Alberni to postpone such measures.
4. The City of Port Alberni will endeavour to apply the principles of full cost accounting. When evaluating reasonably foreseeable costs of proposed actions and alternatives, the City of Port Alberni will consider costs to human health and the environment.
5. The City of Port Alberni will continue to regularly monitor, report on, and integrate environmental objectives in planning, decision-making and operational activities. The City of Port Alberni will

DRAFT DECLARATION THE RIGHT TO A HEALTHY ENVIRONMENT

consult with citizens as part of the process of evaluating progress towards fulfilling this declaration and toward its broader goals and objectives.

6. During the next Official Community Plan and Comprehensive Sustainability Plan reviews, the City of Port Alberni will specify objectives, targets, timelines and actions the City of Port Alberni will consider, within its jurisdiction, to address the residents' right to a healthy environment under section 1, including priority actions to:
 - a. distribute of environmental benefits and burdens equitably within the municipality, preventing the development of pollution "hot spots";
 - b. consider whether infrastructure and development projects of the City of Port Alberni and private sector respect the objective of protecting the environment, including air quality;
 - c. address climate change by reducing greenhouse gas emissions and implementing adaptation measures;
 - d. responsibly increase density in accordance with growth and servicing strategies that respect the objective of a healthy environment;
 - e. prioritize walking, cycling and public transit as preferred modes of transportation;
 - f. prioritize infrastructure and protected water sources for the provision of safe and accessible drinking water;
 - g. promote the availability of safe food;
 - h. reduce solid waste and promote recycling, re-use and composting;
 - i. establish and maintain accessible green spaces in residential neighbourhoods, and protect and conserve nature in public open spaces;
7. the City of Port Alberni will review the objectives, targets, timelines and actions of its healthy environment policy every five (5) years, and measure progress toward fulfilling this Declaration; and
8. the City of Port Alberni will consult with residents as part of this process.