



# Growing Forward

## Beneficial Management Practices 2011/2012

### The Canada – British Columbia Environmental Farm Plan Program

Canada – British Columbia Environmental Farm Plan (EFP) Program complements and enhances the current stewardship practices of producers. The EFP program applies to all types and sizes of farm operations throughout the province. As a participant in this program, producers are able to identify their farm's environmental strengths, prioritize any potential risks to the environment, and take advantage of tools and techniques available to manage those risks.

### Beneficial Management Practices Program

Producers who develop and have a completed and current EFP are eligible to apply for cost-shared incentives through the Growing Forward Agreement "On-Farm Action" Beneficial Management Practices (BMP) Program to implement actions identified in their on-farm environmental action plans. The following document lists the BMP categories and practices eligible for cost-shared funding in British Columbia. Each Category or Practice Code specifies the percentage of the project costs and the maximum amount of funds payable from the program.

#### Application Steps

1. **Complete an EFP for your farm and receive a 'Statement of Completion' from the BC ARDCORP recognized Planning Advisor**
2. **Fill out a BMP application form (providing all requested identification and details of your project)**
3. **Have the application form signed by both the applicant and a Planning Advisor**
4. **Submit the application form to the ARDCORP office**

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## General Policy Statements and Conditions for BMP Program.

The following lists of Beneficial Management Practices are for the Program Year April 1, 2011 to March 31, 2012 and are subject to annual revision during the life of the Growing Forward Agreement. Previous BMP Category codes established under the Agriculture Policy Framework Agreement (APF) have been maintained. All codes from the APF agreement remain on the list as place holders in the event other organizations are able to fund these BMPs or there are policy changes which would allow them to be funded in at a future time.

1. **Access to the BMP program:**
  - a. Access will be based on an Environmental Farm Plan (EFP) that is less than 5 years old and reflects the current farm or ranch operation. The EFP must be renewed if it is more than 5 years old, or there have been changes made on the farm or ranch operation that could have impacted the environmental risk. This does not imply the farm operation will be able to access On-Farm Action program dollars nor does it imply the farm cap will be reset.
  - b. **All prerequisite supplemental assessments (Nutrient or Riparian Management Plans or Water Use Assessment), that when triggered as part of the EFP assessment process, must be completed and submitted to ARDCorp to be eligible to receive any BMP incentive funding.** The compulsory supplemental plans (such as Nutrient or Riparian Management Plans or Water Use Assessment) may be eligible for BMP incentive funding pending pre-approval from ARDCorp. BMP incentive funding for the compulsory supplemental assessments may be eligible for reimbursement directly upon their completion.
2. **Date:** Funding is designated to change practices on existing farm or ranch operations where there is undesirable environmental risk(s) have been identified in the EFP. It is not designed for the development of new farm or ranch operations or to incent a change in enterprise type. The practice to be changed must have been in existence on the operation on or before January 1, 2004 to be eligible for funding. The On-Farm Action funding is designated to make necessary changes to existing operations or practices that are impacting water quality, quantity or climate change.
3. **Farm Cap:** Overall farm Cap for BMP Program remains at \$70K for any farm that has or is participating in the Canada-BC Environmental Farm plan Program. Those operations that participated in the BMP program under APF or Continuity Year Agreements which have not reached the \$70K farm cap can continue to access the program until such time as their farm cap has been met.
4. **Projects per Application:** Each eligible project constitutes a single application, but some projects may include more than one practice, however, category caps and farm caps still apply.
5. **Number of project applications:** Eligible farm or ranch operations are limited to two BMP applications per year per completed EFP. Planning BMP's are not included in this total.
6. **Project justification:** For each project, the following must be included with the BMP project application:
  - What environmental issue is being addressed by this project?
  - How will this project resolve the environmental issue?
7. **Funding of partial projects:** Funding for partial projects are eligible only when the partial projects, on their own, achieve significant environmental risk reduction.
8. **Equipment:** Program may provide funding for the environmental enhancing components of new or existing equipment. This is based on a project justification, cost estimates and may be subject to a technical review by appropriate experts.

9. **Stacking:** Program policy sets a percentage maximum amount of government funds which could be used towards the total project costs. For Growing Forward environmental programming this has been set at 75%. Where funding is provided by a government agency and the agency deems that the funding is not from a Canadian government (e.g. DFO use of funds originating in the United States), a letter from the agency confirming the source of funds must accompany the request for payment.
10. **In-kind:** One of the purposes of allowing in-kind contributions to cover a portion of the project costs is to reduce the cash costs for the applicant. In-kind labour must be indentified on the initial BMP project application.
11. **Project initiation:** Projects will be considered ineligible for funding if any portion has been initiated prior to approval.
12. **Project completion:** All projects must be completed prior to December 31<sup>st</sup> of the year they are approved. Approval of projects will be based on the assumption they will be complete by the end of the calendar year unless clearly specified in the BMP program category (i.e., a preapproved multi- year span (up to the end of the agreement) for an approved riparian or shelterbelt planting). Work and invoices must be completed and dated December 31<sup>st</sup> unless written consent by the program administration is give to carry on with project work beyond that date. Carrying on will only be considered in extenuating circumstances (i.e., delays as a result of regulatory approval)
13. **Caps and Cost Shares for BMP Categories:** These have been set as of January 31, 2011 and are valid for the 2011/2012 BMP, however, are subject to revision.
14. **Materials on Hand:** The provision to pay for materials on hand for any projects (e.g., fencing) is not available. Eligible costs will only be for those services and materials purchased after project approval.
15. **Evidence of payment:** The program requires a paid invoice, cancelled cheque with invoice, or credit card transaction as evidence of payment.
16. **Cancelled Projects:** Any projects cancelled by applicant or time deadline are considered cancelled. Any materials or services obtained for a cancelled project are not eligible for payment if a new application is received at a later date. By previously starting a project, it does not mean it is ineligible for further consideration under a new application. However, all costs incurred for materials or services under the previous application will be ineligible for funding under the new application.

Note:

- A. CEEA = Canadian Environmental Assessment Act – CEEA or CEEA equivalency may be required for any construction for many Categories (in most cases applicants can use construction mitigation Standard Operating Procedures)
- B. Engineering design work may be an eligible cost as a standalone item if a project does not proceed for economic, technical or environmental reasons such as CEEA
- C. Engineering costs should be included as part of the BMP costs for and structures that require engineering approval (i.e., structures, roofs, etc.)
- D. All projects must abide by all applicable Federal, Provincial and Municipal laws and regulations, including, but not limited to, the Federal and Provincial environmental assessment and protection acts, trade agreements and legislation acts, and zoning bylaws.

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
01  Improved Manure Storage and Handling	0102  30%  \$30K	<b>Improved features to prevent risks of water contamination</b> (examples could include liners for earthen storages or removal of tile drains near storage or upgrades to transfer pipes to prevent leaks or spills)	<ul style="list-style-type: none"> <li>Construction of new manure storages for solid or liquid manure is no longer an eligible program cost item.</li> </ul>	<b>Water Quality/ Air Quality</b> <ul style="list-style-type: none"> <li>Reduced risk of runoff of manure nutrients from overflowing manure storage structures</li> <li>Reduced risk of leaks and spills of manure</li> <li>Reduced risk of leaching of manure nutrients to groundwater</li> <li>Reduced need to spread manure during high risk/rainfall periods, reducing soil compaction and risks to surface water quality from manure nutrients</li> <li>Facilitates manure spreading when crops can benefit from the fertilizer value of manure</li> </ul>	Nutrient Management Plan (NMP) before access.
	0104  30%  \$30K	<b>Cover systems for existing solid manure</b> storage structures (this does not include the pad or walls)			
	0105  50%  \$5K	<b>Assessment and monitoring of existing manure storage infrastructure</b>			
	0106  50%  \$10K	<b>Engineering design work</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)			
02  Manure Treatment	0201  30%  \$30K	<b>Dewatering systems</b> Nutrient and bedding recovery systems for manure	<ul style="list-style-type: none"> <li>For anaerobic digestors see 3101-2</li> <li>For composting of manure see 0803</li> </ul>	<b>Air Quality/ Water Quality/ Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Reduced liquid manure volume reduces the risks of water contamination by facilitating land application of appropriate rates</li> <li>Reduced manure volume facilitates export of excess manure nutrients off the farm</li> <li>Nutrient recovery improves quality of the water that is discharged into drainage systems or recycled in the barn</li> <li>Nutrient recovery add nutrients back into the solid phase of manure</li> </ul>	NMP prior to access.
	0204  50%  \$10K	<b>Engineering design work</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)			
03  Manure Land Application	0301  30%  \$10K	<b>Specific equipment for land application of manure</b> Examples of eligible projects include specialized modifications to equipment for improved manure application to land such as: low trajectory, sleighfoot, or band spreaders  A. Solid manure spreaders: funding may be provided for the additional costs of cyclone spreading attachments. Other		<b>Air Quality/ Water Quality/ Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Increased retention of nitrogen in soil and crop that could otherwise be lost to air or water</li> <li>Equipment such as a sleighfoot or low trajectory boom reduce emissions and</li> </ul>	NMP prior to access.

BMP Category	Practice Code (Individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
		types of spreaders will be reviewed, on a case by case basis, to determine components that can be funded from the program.		can improve nutrient management efficiency <ul style="list-style-type: none"> <li>Minimized nitrous oxide (N<sub>2</sub>O) release</li> <li>Reduced runoff of manure nutrients</li> <li>Low ammonia loss and odour</li> <li>Low soil compaction, decreasing runoff risks</li> </ul>	
04  In Barn Improvements  Practice Code 0403 will only be offered in 2011/2012 with an entire category capped at \$200K for the program year	0403  50%  \$20K	<b>Electrostatic Precipitators for dust control in fully enclosed livestock housing facilities.</b> Examples of eligible project expenses include the Electrostatic Precipitators systems and associated power supplies, equipment for specialized modifications to existing equipment for installation of Electrostatic Precipitators system; installation of equipment by a qualified professional	<ul style="list-style-type: none"> <li>Maintenance of the electrostatic precipitators after installation</li> </ul>	<b>Air Quality/ Water Quality/ Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Minimized release of gaseous nitrogen and deposition in surrounding areas</li> <li>Increased retention of nitrogen manure</li> <li>Minimized particulate matter (PM) release</li> <li>Minimized odour release</li> </ul>	
05  Farmacyard Runoff Control / Storm water Management	0501  50%  \$20K  0502  50%  \$20K  0503  50%  \$20K	<b>Upstream diversion around farmyards; downstream protection</b> (e.g., catch basins, retention ponds, constructed wetlands)  <b>Construction of impermeable base</b> and roof for minimizing runoff from livestock pen areas and confinement areas (feed bunks, water infrastructure, walls and electrical costs are not eligible)  <b>Engineering design work</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)	<ul style="list-style-type: none"> <li>Gutters and downspouts for farm buildings are not eligible for funding. These are considered to be conventional building components that are the responsibility of producers</li> </ul>	<b>Water Quality</b> <ul style="list-style-type: none"> <li>Reduced risk of contaminated runoff water moving into groundwater and surrounding surface waters; increased protection of water quality for human and animal health</li> </ul>	
06  Relocation of Livestock Confinement and Horticultural Facilities	0601  50%  \$25K  0602  50%  \$25K  0603  50%  \$25K	<b>Relocation of livestock facilities</b> such as corrals, paddocks and wintering sites away from riparian areas  <b>Relocation of horticultural facilities</b> such as greenhouses and container nurseries from riparian areas  <b>Engineering design work</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)	<ul style="list-style-type: none"> <li>Funding is to be used to move operations away from sensitive surface water, riparian areas, critical wildlife habitat and areas of severe erosion potential.</li> <li>Groundwater protection: Proximity to sensitive groundwater is not a rationale for use of this BMP.</li> </ul>	<b>Water Quality/ Biodiversity</b> <ul style="list-style-type: none"> <li>Limit direct animal access and duration of cattle in a riparian area or near water bodies</li> <li>Enhanced riparian health</li> <li>Reduced impacts on water quality</li> </ul>	

BMP Category	Practice Code (Individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
07 Wintering Site Management	0704 50% \$15K	<b>Field access improvements</b> Examples include: alleyway / access lane upgrades		<b>Water Quality</b> • Reduced soil erosion	
08 Product and Waste Management	0801 30% \$5K	<b>Improved on-farm storage and handling of agricultural products</b> Improved storages or handling for fertilizer, silage, petroleum products, and pesticides. The following conditions are for specific storage facilities: A. Fertilizer storage: All types of structures are eligible for funding assistance with a limit being placed on the area of the structure based on the type(s) of crop and area being farmed. The maximum area of the structure is the lesser of 1.86 m <sup>2</sup> (20 ft <sup>2</sup> ) per pallet or 0.93 m <sup>2</sup> (10 ft <sup>2</sup> ) per hectare of land receiving the fertilizer B. Fuel storage: The program supports the cost of providing a roof and containment for a single walled tank or the cost of a double walled tank. The program will not provide a roof and containment of a double walled tank. The cost of a concrete slab and bollards for double walled tanks are eligible items. Spill kits and fire extinguishers are eligible items. Fuel storage structures should be designed with sufficient roof overhang and partial walls to minimize water collecting in the containment structure. C. Silage storage: Funding assistance can be provided to modify an existing facility or build a new facility where the existing facility (in place on or before January 1, 2004) is not adequate from an environmental protection perspective. Existing facilities include pit silos and free standing bunkers silos in addition to other types of constructed silos.	• Worker sanitation facilities: These facilities are not eligible for funding assistance under the program.	<b>Water Quality</b> • Protection of water, air and soil quality	
	0802 30% \$5K	<b>Improved on-farm storage, handling, and disposal of agricultural waste</b> Improved storages or handling for livestock mortalities, culled fruit and vegetables, crop residue and wood waste.			

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		<p>The following conditions are for specific waste handling practices:</p> <p>A. Poultry mortality incinerators: These are eligible as long as the incinerator uses <i>best available technology</i> and meets appropriate air emission standards.</p> <p>B. Mulching mowers: Heavy duty mulching mowers for dealing with orchard prunings are eligible for incremental assistance. Eligible funding is base on the cost difference between conventional and mulching mowers.</p> <p>C. On-farm processing and marketing: These are considered farm operations where the majority of the material being processed or marketed is produced on the farm or the majority of the output of the processing operation is used on the farm. Waste management from these activities is eligible for funding. Where wastes are not agricultural wastes, the farm must ensure that appropriate authorizations for disposal have been obtained.</p>			
	0803 30% \$15K	<p><b>Composting of agricultural waste</b> Composting technologies that are appropriate for the composting of on-farm generated agricultural wastes including livestock mortalities, manure, fruit and vegetable culls, crop residues, wood, and straw.</p>			
	0804 30% \$5K	<p><b>Engineering design work</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)</p>			
	0805 50% \$25K	<p><b>Wood residue management</b> On-farm or portable chippers or forced air assistance burners. Burners must meet the conditions of the BC Ministry of Environment and meet appropriate air emission standards.</p>	<ul style="list-style-type: none"> <li>• Burners that do not meet the standards of the BC Ministry of Environment</li> </ul>	<p><b>Climate Change / Air Quality</b></p> <ul style="list-style-type: none"> <li>• Reduce or eliminate particulate emissions from the management of wood</li> <li>• Reduce CO<sub>2</sub> emissions from burning wood</li> <li>• Reduce greenhouse gases</li> <li>• Reduce Criteria air contaminants from burning wood</li> </ul>	

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
09 Water Well Management	0901 50% \$3K	<b>Sealing &amp; capping old water wells</b>	<ul style="list-style-type: none"> <li>Replacement wells</li> </ul>	<b>Water Quality</b> <ul style="list-style-type: none"> <li>Reduced risk of groundwater contamination by contaminants like fuel or pesticides</li> <li>Reduced health risk to people and animals</li> </ul>	
	0902 50% \$3K	<b>Protecting existing water wells from surface contamination</b>			
10 Riparian Area Management	1001 60% \$25K	<b>Alternative Watering Systems To Manage Livestock</b> For example: solar, gravity-fed, wind, grid or alternative power <ul style="list-style-type: none"> <li>Pumps</li> <li>Storage</li> <li>Power setup from existing power line</li> <li>Waterlines</li> <li>Construction</li> <li>Protective fencing or portable panels</li> </ul> Note: Approval of projects will be contingent upon adherence to all federal, provincial, and municipal guidelines and regulations for project design and implementation.	<ul style="list-style-type: none"> <li>Repair and maintenance of existing riparian pasture management systems and equipment</li> <li>On-going maintenance costs of existing equipment.</li> <li>Opportunity costs associated with payments for land taken out of production.</li> <li>Installation costs of main electrical service.</li> </ul>	<b>Water Quality/ Biodiversity/ Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Limit direct animal access and duration of cattle in a riparian area or near water bodies</li> <li>Enhance riparian health</li> <li>Reduce impacts on water quality</li> <li>Livestock health</li> <li>Year round reliable water source for livestock</li> </ul>	Riparian Management Plans prior to access to funding.
	1002 60% \$25K	<b>Riparian Buffer Establishment</b> For example: establishment / planting of adaptable, hardy, permanent native and/or non-invasive introduced species of grasses, forbes, trees and shrubs <ul style="list-style-type: none"> <li>Pre-planting site preparation and plant purchase costs prior to the year of planting if needed.</li> <li>Establishment year site preparation</li> <li>Weed control</li> <li>Irrigation (trickle or drip)</li> <li>Temporary fencing</li> <li>Purchase / planting / establishment costs for grasses from certified seed, forbes, trees and shrubs for the year of planting plus one year of maintenance after the planting year, or the termination of Growing Forward funding, whichever comes first.</li> <li>Consultative service for suitable species, composition and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>On-going maintenance</li> <li>Costs associated with acquiring / planting invasive plant species</li> <li>Opportunity costs associated with payments for land taken out of production</li> <li>Landscape quality or landscaping type plantings</li> <li>Tree and shrub planting and establishment costs in excess of \$50 per tree/shrub, exclusive of all establishment costs, including in-kind</li> <li>Commercial fruit trees, Christmas trees, ornamentals, afforestation, woodlot establishment and reforestation.</li> <li>Purchase and relocation of established trees</li> </ul>	<b>Water Quality/ Soil Quality/ Biodiversity/ Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>A 'filtering' structure to capture nutrients, pesticides or sediments from a non-point pollution source</li> <li>Promote infiltration,</li> <li>Erosion control</li> <li>Increased biodiversity associated with habitat creation.</li> <li>Invasive plant management</li> <li>Sequester carbon</li> <li>Increases agricultural sequestration of ambient carbon dioxide (CO<sub>2</sub>) (as long as biomass in trees are kept constant)</li> <li>Protects waterways and wetlands from eutrophication by retaining some of the nutrients escaping from agricultural fields and barn yards</li> <li>Provides wildlife habitat and biodiversity</li> <li>Could generate</li> </ul>	Riparian Management Plan with design (BMP 30) prior to access to funding.

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	1003 60% \$25K	<p><b>Fencing to Manage Grazing and Improve Riparian Condition and Function:</b> To cover a portion of the costs for:</p> <ul style="list-style-type: none"> <li>Fencing parallel to water's edge to exclude livestock in order to maintain or improve riparian conditions and function. Eligible permanent fencing inclusive of all costs including in-kind labour.</li> <li>Protection of newly established or enhanced riparian buffers (BMP 1002)</li> <li>Temporary Cross fencing to implement rotational, seasonal, rest, swath and extended grazing systems in support of riparian management. Eligible cross fencing will be inclusive of all costs including in-kind labour.</li> <li>Portable electric fencing, set-ups, including solar battery chargers, battery and initial line and post purchases.</li> </ul> <p>Note: Approval of projects will be contingent upon adherence to all federal, provincial, and municipal guidelines and regulations for project design and implementation</p> <p>A. Cross fencing: Eligibility for funding must be based on required plan(s) that identifies the importance and value of cross fencing in dealing with identified environmental risks and achieving environmental benefits.</p> <p>B. Fencing costs (all fences): The maximum amount of eligible costs for materials, labour and equipment is \$20.00 (\$12.00 from the program) per metre or \$6.00 (\$3.60 from the program) per foot.</p>	<ul style="list-style-type: none"> <li>Repair and maintenance of existing riparian pasture management systems and equipment (e.g. can't be used to repair existing fence)</li> <li>On-going maintenance costs</li> <li>Opportunity costs associated with payments for land taken out of production.</li> </ul>	<p>revenue if integrated with the concept of agro-forestry</p> <p><b>Water Quality/ Soil Quality/ Biodiversity/ Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>Protection of surface water from contamination</li> <li>Enhancement of biodiversity</li> <li>Protection of stream banks from destabilization.</li> <li>Protection of riparian vegetation</li> <li>Carbon sequestration</li> <li>Support livestock health.</li> </ul>	<p>Riparian Management Plans prior to access to funding.</p> <p>Grazing Management Plans may be required based on farm activities.</p>
	1004 60% \$25K	<p><b>Native Range and Restoration or Establishment</b></p> <ul style="list-style-type: none"> <li>Seeding and planting of native plant material (grasses, legumes, forbes, shrubs, and trees) and on-going maintenance of an established or restored site.</li> </ul> <p>Note: Native vegetation refers to plant species indigenous to the area. Restoration refers to improving the ecological integrity of</p>	<ul style="list-style-type: none"> <li>Pasture seeding and establishment costs</li> <li>Pasture renovation</li> <li>Routine forage management practices</li> <li>Costs associated with acquiring / planting invasive plant species</li> <li>Opportunity costs associated with payments for land taken out of production</li> </ul>	<p><b>Water Quality/ Soil Quality/ Biodiversity/ Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>Riparian area may be best protected by enhancements to native vegetation in the surrounding upland</li> <li>Establishment of native species to</li> </ul>	<p>Grazing Management Plans may be required based on farm activities</p>

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		<p>disturbed or degraded sites. 'Establishment' refers to an area under different land use and the native species must be planted.</p>	<ul style="list-style-type: none"> <li>Establishing forages as part of the operation's normal crop rotation</li> </ul>	<p>enhance biodiversity</p> <ul style="list-style-type: none"> <li>Compliment management goals of adjoining native habitat land parcels managed by different agencies or individuals</li> <li>Restoration of disturbed sites with contiguous areas of healthy native riparian vegetation</li> </ul>	
	<p>1005 60% \$25K</p>	<p><b>Grazing Management in Surrounding Uplands</b> To cover a portion of the costs for:</p> <ul style="list-style-type: none"> <li>Cross fencing to implement rotational, seasonal, rest, swath, and extended grazing systems</li> <li>Eligible permanent fencing inclusive of all costs including in-kind labour.</li> <li>Portable electric fencing, set-ups, including solar battery chargers, battery and initial line and post purchases.</li> <li>Cross fencing: Eligibility for funding must be based on required plan(s) that identifies the importance and value of cross fencing in dealing with identified environmental risks and achieving environmental benefits.</li> </ul> <p>Fencing costs (all fences): The maximum amount of eligible costs for materials, labour and equipment is \$20.00 (\$12.00 from the program) per metre or \$6.00 (\$3.60 from the program) per foot.</p> <p>Note: Approval of projects will be contingent upon adherence to all federal, provincial, and municipal guidelines and regulations for project design and implementation</p>	<ul style="list-style-type: none"> <li>Perimeter fencing</li> <li>Pasture seeding and establishment costs</li> <li>Pasture renovation</li> <li>Repair and maintenance of existing riparian erosion control or riparian pasture management systems and equipment (e.g. can't be used to repair existing fence)</li> <li>On-going maintenance costs</li> <li>Opportunity costs associated with payments for land taken out of production.</li> </ul>	<p><b>Water Quality/ Biodiversity/ Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>Supports diverse plant communities and sensitive species</li> <li>Protect water and soil quality</li> <li>Maintenance or improvement of vegetation and animal production parameters</li> <li>Improved range condition</li> <li>Increased animal production</li> <li>Increased length of the grazing season</li> <li>Improved wildlife habitats</li> </ul>	<p>Grazing Management Plans may be required based on farm activities</p>
	<p>1006 60% \$25K</p>	<p><b>Improved Stream Crossings</b> Costs associated with structures that demonstrate improved riparian conditions</p> <ul style="list-style-type: none"> <li>new structures</li> <li>improvements and/or repairs to existing structures</li> <li>removal or re-location of existing structures</li> </ul> <p>Eligible expenses will include site assessment, engineering design, and materials, labour, and equipment rental associated with earthwork, installation of</p>	<ul style="list-style-type: none"> <li>On-going maintenance costs</li> <li>Stream crossing projects that are associated with a new or expanded agricultural activity– where no crossing has existed previously</li> </ul>	<p><b>Water Quality/Biodiversity</b></p> <ul style="list-style-type: none"> <li>Reduced streambank erosion</li> <li>Improve water quality</li> <li>Enhance biodiversity</li> </ul>	<p>Riparian Management Plans prior to access to funding.</p>

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
	1007 75% \$25K	<p>structures, and re-vegetation work in addition to the constructed works. Note: All projects must be properly designed by an accredited engineering consultant or a qualified professional in accordance with federal, provincial and local government regulations and specifications</p> <p><b>Landscape-based group farm riparian management plan project and related on-farm action BMPs (1001-1006)</b> Approval of projects will be contingent upon:</p> <ul style="list-style-type: none"> <li>• Project design</li> <li>• 60% or more of the linear coverage of the waterbody available to the project.</li> <li>• Approval from federal, provincial and municipal agencies as to the merits of a joint project.</li> <li>• Preference will be given to project areas considered critical or important habitat.</li> </ul>	<ul style="list-style-type: none"> <li>• On-going maintenance costs</li> <li>• Costs associated with acquiring/planting invasive plant species</li> <li>• Opportunity costs associated with payments for land taken out of production</li> <li>• Landscape quality or landscaping type plantings</li> <li>• Tree and shrub planting and establishment costs in excess of \$50 per tree/shrub, exclusive of all establishment costs, including in-kind</li> <li>• Commercial fruit trees, Christmas trees, ornamentals, afforestation, woodlot establishment and reforestation.</li> <li>• Purchase and relocation of established trees</li> </ul>	<p><b>Water Quality/ Biodiversity/ Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>• Reduce erosion</li> <li>• Improve water quality</li> <li>• Improve water infiltration</li> <li>• Support regional riparian priorities</li> <li>• Reduce impact of invasive plants</li> <li>• Maintain or enhance habitat connections across the landscape</li> <li>• Improve habitat integrity and biodiversity.</li> <li>• Provide critical movement corridors</li> <li>• Enhance carbon sequestration</li> </ul>	<p>Riparian Management Plans prior to access to funding.</p> <p>Grazing Management Plans may be required based on farm activities</p>
11 Erosion Control Structures (Riparian)	1101 60% \$20K	<p><b>Constructed Works</b></p> <ul style="list-style-type: none"> <li>• <b>Contour Terraces</b> (earthwork, seedbed preparation, seed)</li> <li>• <b>Gully Stabilization/Grassed Waterways</b> (earthwork, erosion control matting, silt fencing, seedbed preparation, seed, outlet structure)</li> <li>• <b>Bank Stabilization</b> (bank shaping, revetment, gabions, riprap, crib walls, re-vegetation, blanketing and combinations)</li> <li>• <b>Drop Inlet Structures and In Channel Control</b> (drop structures)</li> <li>• <b>Improved Infiltration of Concentrated Water Flow</b> (filter trenches, filter wells, diffusing wells, etc.)</li> <li>• <b>Retention Ponds and Erosion Control Dams.</b></li> </ul> <p>Eligible expenses will include site assessment, engineering design, and materials, labour, and</p>	<ul style="list-style-type: none"> <li>• Systematic tile and other subsurface drainage systems that are not an integral part of erosion control structure</li> <li>• Activities related to constructing or repairing drainage systems, where the purpose is to remove ponded water or draining saturated soils, are not eligible for funding</li> <li>• Converting open channels to closed drainage systems</li> <li>• Construction of new drainage channels or repair of existing drainage systems (e.g. drainage ditch clean-outs)</li> <li>• Costs of tile and installation that exceeds 30 metres for riparian</li> </ul>	<p><b>Water Quality/ Soil Quality</b></p> <ul style="list-style-type: none"> <li>• reduce soil erosion by water</li> <li>• to remove surface water at a non-erosive velocity</li> <li>• to reduce sediment content in runoff water</li> <li>• to reduce peak runoff rates to installations downstream</li> <li>• to improve water quality</li> <li>• diversity and cover for wildlife</li> <li>• restore a natural channel form</li> <li>• reduce velocity and the erosive force of runoff water</li> <li>• improved infiltration of concentrated water flow through waterways</li> <li>• reduce storm runoff</li> </ul>	

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
		<p>equipment rental associated with earthwork, installation of structures, and re-vegetation work in addition to the constructed works.</p> <p>Note: All projects must be properly designed by an accredited engineering consultant or a qualified professional in accordance with federal, provincial and local government regulations and specifications</p>	<p>drop inlet structure projects</p> <ul style="list-style-type: none"> <li>• Installation of drop inlets for drainage of ponded surface water (e.g. not associated with an erosion control structure)</li> <li>• Header tile systems</li> <li>• Tile outlet structures associated with new tile drainage installations</li> <li>• Retrieving topsoil from areas of deposition and transporting it upslope to eroded hillsides</li> <li>• Construction and land improvement activities not associated with soil erosion control</li> </ul>	<p>flow rates</p> <ul style="list-style-type: none"> <li>• trap sediments</li> </ul>	
	<p>1102</p> <p>60%</p> <p>\$20K</p>	<p><b>Engineering design work.</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)</p>			
<p>16</p> <p>Improved Pest Management</p>	<p>1601</p> <p>30%</p> <p>\$5K</p> <p>1602</p> <p>30%</p> <p>\$5K</p>	<p><b>Equipment modification for improved application</b> Eligible equipment modification could include:</p> <p>A. Alterations to sprayers or tillage equipment to reduce pesticide use: for example, funding may be provided for the additional incremental costs of converting an existing sprayer or to modify conventional tillage equipment</p> <p>B. Purchase of new sprayers or tillage equipment: a portion of the purchase of a new sprayer or piece of tillage equipment that reduces pesticide use where. The project application must identify the environmental benefit of the new equipment.</p> <p><b>Information collection and monitoring</b></p>	<ul style="list-style-type: none"> <li>• Non-wildlife pests: Funding will not be provided to assist with the control of non-wildlife, pest species that are commonly found on farms and ranches in British Columbia</li> <li>• P.ramorum: Any projects related to control of P.ramorum must be based on a revised or new Integrated Pest Management Plan that deals with all pest issues on the farm</li> <li>• Implementing practices from a revised IPM plan: One year of funding can be provided to assist producers to become familiar with new IPM practices identified in a revised</li> </ul>	<p><b>Water Quality/ Biodiversity</b></p> <ul style="list-style-type: none"> <li>• Minimize human exposure to chemical pesticides in food and the environment</li> <li>• Reduced risk of contamination of water, soil, air, and habitat</li> <li>• Reduced risk of increasing pest resistance to chemical pesticides</li> <li>• Reduced risk of chemical pesticides harming non-target or beneficial organisms</li> </ul>	<p>Integrated Pest Management plan will be required</p>

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
	1603 30% \$5K	<b>Biological control agents or Cultural control practices</b> <ul style="list-style-type: none"> <li>IPM practices: Where uses of IPM practices are new to the producer, one year of funding can be provided to assist producers to become familiar with these techniques in accordance with an IPM plan.</li> <li>IPM Plan must be in place.</li> </ul>	IPM plan <ul style="list-style-type: none"> <li>Common pest management practices: Pest management practices common to the industry and well understood will not be funded</li> </ul>		
17 Nutrient Recovery from Waste Water	1701 30% \$20K	<b>Recycling of waste water</b> streams from milkhouses, fruit and vegetable washing facilities, and greenhouses in order to recover nutrients		<b>Water Quality/ Water Amount</b> <ul style="list-style-type: none"> <li>Reduced risk of contamination of surface and groundwater from the effluent from agricultural production facilities</li> </ul>	NMP required for selected sectors
	1702 30% \$20K	<b>Engineering design work</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA)			
18 Irrigation Management	1801 <b>For nursery &amp; greenhouse operations</b>  Eligible cost limit \$5K per hectare  30%  Cap \$10K per eligible farm operation  <b>For tree fruit, grape and berry operations</b>  Eligible cost limit \$3K per hectare  30%  Cap \$10K per eligible farm operation	<b>Irrigation equipment modification / improvement to increase water and nutrient use efficiency</b> <ul style="list-style-type: none"> <li>Drip Irrigation lateral lines, emitters and filters</li> <li>Controllers, electric valves and low voltage wiring to valves</li> <li>Injection equipment for system treatment or fertilizer injection</li> <li>Conversion of existing systems to high efficiency low pressure center pivot systems. System must be replacing an existing irrigation system, new systems are not eligible. Injection and irrigation scheduling equipment are eligible only if part of a system efficiency upgrade funded by the program</li> </ul>	<ul style="list-style-type: none"> <li>Mainlines and sub main piping</li> <li>Pumps, electrical supply and panels unless eligible under practice code 1804.</li> <li>Installation costs of equipment</li> <li>In kind services by applicant</li> <li>Wires and posts for hanging drip irrigation lines</li> </ul>	<b>Water Amount/ Water Quality/ Climate Change Mitigation/ Climate Change Adaption</b> <ul style="list-style-type: none"> <li>Increasing irrigation system efficiency and implementing irrigation scheduling and climate monitoring will support the commitment made by the province's <i>Living Water Smart</i> plan for the agriculture industry to become more efficient</li> <li>Reducing water use will reduce impacts on streams</li> <li>Fertilizer injectors improve efficiency and reduce loss of nutrients into groundwater and streams</li> </ul>	Certified irrigation plan required for all applications under this category. Cost of plan is eligible under category 29  Projects should target an increase of 15% water use efficiency – which must be identified in the certified plan.
	1802 50% \$5K	<b>Climate stations or improved irrigation management</b> <ul style="list-style-type: none"> <li>Irrigation scheduling equipment such as soil moisture sensors and moisture meters</li> <li>Weather station</li> <li>Data transmission unit by either cell or satellite. Annual data transmission costs as required by program, contact BC Ministry of Agriculture for details</li> </ul>	<ul style="list-style-type: none"> <li>Labour is not eligible.</li> </ul>	<b>Water Amount/ Climate Change Adaption</b> <ul style="list-style-type: none"> <li>Providing climate data for regions that currently do not have adequate climate data available will be useful to all producers in the region</li> <li>Posting data on Farmwest website will</li> </ul>	Climate station must be connected to the Farmwest web site

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
				allow irrigation scheduling calculator to access data	
	1804 60% \$15K	<b>Irrigation Infrastructure Improvement - Forage</b> <ul style="list-style-type: none"> <li>Primary target of this practice code is beef forage producers in the Interior of the province</li> <li>Producers who produce forage for other livestock or vegetable growers in the Interior will be also eligible</li> <li>An existing irrigation system must be in place</li> <li>A certified irrigation designer must inspect the site and prepare a report on the required improvements prior to the project being approved</li> <li>Site inspection must be completed and signed off by certified irrigation designer</li> <li>Eligible items include (if identified in plan): <ul style="list-style-type: none"> <li>replacement of aluminum and/or steel mainlines</li> <li>nozzles, gaskets, sprinklers, suction screen, and intake pipes</li> </ul> </li> </ul>		<b>Water Amount/ Climate Change Mitigation/ Climate Change Adaption</b> <ul style="list-style-type: none"> <li>Increasing irrigation system efficiency and implementing irrigation scheduling and climate monitoring will support the commitment made by the province's <i>Living Water Smart</i> plan for the agriculture industry to become more efficient</li> <li>Reducing water use will reduce impacts on streams</li> </ul>	Irrigation Management Plan is required for all applications under this category. Cost of plan is eligible under category 29  Projects should target an increase of 15% water use efficiency
	1805 30% \$20K	<b>Irrigation System Improvement – extensive systems</b> <ul style="list-style-type: none"> <li>This category is solely for the conversion of lower efficiency sprinkler systems to high efficiency pivot systems with drop tube rotors</li> <li>An existing irrigation system must be in place</li> <li>A certified irrigation designer must inspect the site and prepare a report on the required improvements prior to the project being approved <ul style="list-style-type: none"> <li>Eligible systems to be upgraded are stationary guns, travelling guns, hand-move and wheel-move</li> <li>Also upgrading overhead sprinklers on a pivot to drop tube rotors</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Used pivot systems are not eligible</li> </ul>	<b>Water Amount/ Climate Change Mitigation/ Climate Change Adaption</b> <ul style="list-style-type: none"> <li>Increasing irrigation system efficiency and implementing irrigation scheduling and climate monitoring will support the commitment made by the province's <i>Living Water Smart</i> plan for the agriculture industry to become more efficient</li> <li>Reducing water use will reduce impacts on streams</li> </ul>	Irrigation Management Plan is required for all applications under this category. Cost of plan is eligible under category 29
19 Buffer, Hedgerow and Shelterbelt Establishment	1901 60% \$15K  Applicants can choose to do either Practice Code	<b>Establishment of shelterbelts</b> <ul style="list-style-type: none"> <li>The desired outcome of the shelterbelt establishment must be identified in the plan and reflected in the proposed design and species mix.</li> <li>Shelterbelts must be multi-row (2 rows minimum).</li> <li>Three consecutive years of establishment costs for multi-row planting of tree and shrub</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of trees or shrubs that are intended for harvesting for economic benefit within 15 years such as fruit orchards, Christmas trees, ornamental nursery stock</li> <li>Block or plantation style plantings</li> </ul>	<b>Soil Quality/ Water Quality/ Air Quality/ Climate Change Mitigation/ Climate Change Adaption</b> <ul style="list-style-type: none"> <li>Improve water quality</li> <li>Capture run-off</li> <li>Protection soil from wind erosion</li> <li>Enhance snow</li> </ul>	

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
	1901 or 1902	<p>shelterbelts may be eligible for approved projects. These costs could include pre-establishment site preparation, planting and up to two years of maintenance of the plantings. Project funds would end at the end of three years or the termination of the Growing Forward funding whichever comes first.</p> <ul style="list-style-type: none"> <li>• <b>In-kind valuation for establishing shelterbelts to be 100% of materials cost to a maximum of \$5.00 per metre (\$1.50 per foot) of shelterbelt</b></li> </ul>	<ul style="list-style-type: none"> <li>• Buffer, hedgerow and shelterbelt renovations costs incurred after establishment, or the purchase and relocation of established trees</li> <li>• Buffer, hedgerow and shelterbelt rejuvenation</li> <li>• Landscaping type plantings</li> <li>• Tree and shrub planting and establishment costs in excess of \$50 per tree exclusive of establishment costs, including in-kind</li> <li>• Consultative service for suitable species, composition and maintenance not covered in 1901</li> </ul>	<p>trapping</p> <ul style="list-style-type: none"> <li>• Micro climate enhancement,</li> <li>• Odour, noise and dust mitigation</li> <li>• Enhance biodiversity</li> <li>• Improve habitat diversity and connectivity</li> <li>• Protect structures</li> <li>• Shelter livestock and crops</li> <li>• Improve irrigation efficiencies</li> <li>• Carbon sequestration</li> <li>• Increases agricultural sequestration of ambient carbon dioxide (CO<sub>2</sub>) (as long as biomass in trees are kept constant)</li> <li>• Reduces wind erosion</li> <li>• Reduce dust and odour</li> <li>• Reduce unsightliness (out-of-site-out-of-mind)</li> <li>• Provides wildlife habitat and biodiversity</li> <li>• Could generate revenue if integrated with the concept of agro-forestry</li> </ul>	
	1902  60%  \$15K  Applicants can choose to do either Practice Code 1901 or 1902	<p><b>Tree and shrub materials required for shelterbelt establishment</b></p> <ul style="list-style-type: none"> <li>• Tree materials only for planting around fields and buildings</li> <li>• The desired outcome of the shelterbelt establishment must be identified in the plan and reflected in the proposed design and species mix</li> <li>• Shelterbelts must be multi-row (2 rows minimum)</li> <li>• <b>In-kind valuation for establishing shelterbelts to be 100% of materials cost to a maximum of \$5.00 per metre (\$1.50 per foot) of shelterbelt</b></li> </ul>			
	1903  60%  \$10K  Applicants can choose to do either Practice Code 1903 or 1904	<p><b>Establishment of buffers, and hedgerows:</b></p> <ul style="list-style-type: none"> <li>• The desired outcome of the buffer or hedgerow establishment must be identified and reflected in the proposed design and species mix.</li> <li>• Buffers and hedgerows can be single or multi-row.</li> <li>• Three consecutive years of establishment costs for multi-row planting of tree and shrub buffer and hedgerow materials may be eligible for approved projects. These could include pre-establishment site preparation, planting and up to two years of maintenance of the plantings. Project funds would end at the end of three years or the termination of the Growing Forward funding whichever comes first.</li> <li>• <b>In-kind valuation for establishing buffers and hedgerows to be 100% of materials cost to a maximum of \$5.00 per metre (\$1.50 per foot) of buffer or hedgerow.</b></li> </ul>			

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
	1904  60%  \$10K  Applicants can choose to do either Practice Code 1903 or 1904	<b>Tree and shrub materials required for buffer, and hedgerow establishment</b> <ul style="list-style-type: none"> <li>• Tree materials only for plantings</li> <li>• The desired outcome of the buffer or hedgerow establishment must be identified and reflected in the proposed design and species mix.</li> <li>• Buffers and hedgerows can be single or multi-row.</li> <li>• <b>In-kind valuation for establishing buffers and hedgerows to be 100% of materials cost to a maximum of \$5.00 per metre (\$1.50 per foot) of buffer or hedgerow.</b></li> </ul>			
24  Nutrient Management Planning (NMP)	2401  up to \$2K per plan  Limit of one plan per eligible farm operation	<b>Consultative services to develop nutrient management plans, planning and decision support tools</b> <ul style="list-style-type: none"> <li>• maximum of \$250 can be used for one time manure, soil or compost analysis as part of the eligible costs of the nutrient management plan (on the condition that raw nutrient data – free of farm identification – will be collected for environmental health indicators reporting purposes)</li> <li>• producers may be eligible for a second nutrient management plan at 50% of the original BMP funding in a subsequent year, subject to sign-off of adequate record keeping on the original plan and availability of funds</li> </ul>		<b>Water Quality / Soil Quality / Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>• Minimized risk of water pollution by loss of nitrogen or phosphorus via runoff or leaching</li> <li>• Minimized risk of air pollution by loss of nitrogen as ammonia or N<sub>2</sub>O</li> <li>• Advice to supply crops with nutrients at the appropriate rate, timing and with appropriate methods for optimal crop yield and quality</li> <li>• Reduced emissions of nitrous oxide N<sub>2</sub>O (a global warming gas)</li> </ul>	Linked to BMPs for soil / manure
25  Integrated Pest Management Planning	2501  up to \$2K per plan  limit of one plans per eligible farm operation	<b>Consultative services to develop integrated pest management plans, planning and decision support tools</b>		<b>Water Quality/ Biodiversity</b> <ul style="list-style-type: none"> <li>• Minimize human exposure to chemical pesticides in food and the environment</li> <li>• Reduced risk of contamination of water, soil, air, and habitat</li> <li>• Reduced risk of increasing pest resistance to chemical pesticides</li> <li>• Reduced risk of chemical pesticides harming non-target or beneficial organisms</li> </ul>	

BMP Category	Practice Code (Individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
26  Grazing Management Planning	2601  up to \$2K per plan  limit of two plans per eligible farm operation	<b>Consultative services to develop range and grazing management plans, planning and decision support tools</b>		<b>Water Quality/ Climate Change Mitigation/ Climate Change Adaption/ Biodiversity/ Soil Quality</b>  <ul style="list-style-type: none"> <li>• Supports diverse plant communities, sensitive species,</li> <li>• Protect water and soil quality.</li> <li>• Maintenance or improvement of vegetation and animal production parameters.</li> <li>• Improved range condition,</li> <li>• Increased animal production,</li> <li>• Increased length of the grazing season</li> <li>• Improved wildlife habitats.</li> </ul>	
29  Irrigation Management Planning	2901  Up to \$1K per plan  Limit of one plan per eligible farm operation	<b>Consultative services to produce an irrigation management plan with recommendations that include a certified design layout, material list and maintenance requirements</b>  <ul style="list-style-type: none"> <li>• <i>Irrigation System Assessment Worksheets</i> from EFP Planning Workbook must be included as with the Irrigation Management Plan</li> <li>• Site investigation by certified irrigation designer prior to plan and quote preparation.</li> <li>• Designer to identify areas where maintenance required.</li> <li>• Certified designer must sign and seal each plan for project to be eligible to program.</li> <li>• Certified designer must inspect project after completion and send a signed completion form to program before payment for plan preparation and project costs are made.</li> <li>• An invoice from Certified Irrigation Designer must be submitted to producer outlining services.</li> </ul>	<ul style="list-style-type: none"> <li>• Design plans for new systems</li> </ul>	<b>Water Amount/ Water Quality/ Climate Change Adaption</b>  <ul style="list-style-type: none"> <li>• Developing a certified irrigation plan for all projects under Category 18 will help to ensure that systems are efficient and designed correctly</li> <li>• A system for project inspection and completion can be initiated using certified designers</li> </ul>	Linked to Category 18. All projects except 1802 require certified plans.
	2902  up to \$2K per plan  limit of one plans per eligible farm	<b>Water Management Planning</b>  <ul style="list-style-type: none"> <li>• Consultative services for water management planning to deal with issues arising from excess water (including mapping of existing subsurface drainage systems).</li> </ul>		<ul style="list-style-type: none"> <li>• Guidance for this BMP can be derived from the EFP Drainage Management Guide</li> </ul>	

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
	operation				
30 Riparian Management Plan	3001 up to \$1K per plan  limit of two plans per eligible farm operation	<b>Consultant fees to produce a riparian management plan (RMP) report for farmer with BMP recommendations that include a design layout, species list and maintenance protocols</b> <ul style="list-style-type: none"> <li>RMP is based on a needs assessment from riparian health assessments (RHA's) generated during EFP process</li> <li>Results of RHA's must be included with application for RMP</li> <li>Planning and decision support tools (e.g. computer software, aerial photos)</li> <li>Maps and land resource information costs</li> <li>Data collection, materials and sampling and analysis costs by consultant</li> <li>Design work by consultant for water course and wetland areas and riparian buffer strip projects</li> <li>Report preparation by consultant</li> <li>Plan review with producer</li> </ul>	<ul style="list-style-type: none"> <li>Time, effort and travel by the Producer</li> <li>Professional services not directly related to riparian health assessment and buffer strip planning</li> <li>Field-specific agronomic practices (e.g. variable rate application of crop inputs)</li> <li>Costs associated with developing engineer reports for drainage projects.</li> </ul>	<b>Water Quality/ Soil Quality/ Biodiversity/Climate Change Mitigation/ Climate Change Adaption</b> <ul style="list-style-type: none"> <li>Ecological measuring stick to assess the impact of past and current riparian management practices</li> <li>Baseline from which recommendations for new BMPs to improve riparian health can be developed</li> <li>Evaluate the effectiveness of riparian BMPs in improving riparian health and water quality</li> </ul>	Linked to BMP 10 and 11
31 Methane (CH <sub>4</sub> ) Emission Reduction  Projects must reduce methane emissions from agricultural operations by preventing, suppressing or combusting methane (CH <sub>4</sub> )	3101-1  30%  \$30K  Practice code 3101-1 and 3101-2 are not stackable, meaning that applicants may only apply for one or the other	<b>Covered manure storage</b> <ul style="list-style-type: none"> <li>Floating contact cover (whole sheet)</li> <li>Floating contact cover (aggregated sections – rain water cannot be collected)</li> <li>Water collection system and pumps</li> <li>Assessment, design and construction costs are eligible</li> </ul>	<ul style="list-style-type: none"> <li>Roof structures that do not ensure a sealed headspace above the manure or direct contact between the cover and the manure</li> <li>Storage structures for manure and other agricultural wastes</li> <li>Rain water collection systems or pumps or parts of a larger system that are not directly associated with the manure storage cover</li> <li>Open flares</li> <li>Gas collection and conveyance systems or part of a system that is not directly associated with methane collection from the manure storage or anaerobic reactor tanks</li> <li>Any infrastructure on a legal property which is</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Suppresses methane production (by limiting exchange with free air and thereby moving biochemical equilibrium towards less methane generation)</li> </ul> <b>Air Quality</b> <ul style="list-style-type: none"> <li>Reduces ammonia emission from storage of manure (still need to follow through with improved application technique to realize full ammonia reduction).</li> <li>Reduces odour from storage of manure (odour reduction is approximately equal to % surface area covered)</li> </ul>	Nutrient Management Plan (NMP) before access.

BMP Category	Practice Code (Individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
			not assessed as a farm for tax purposes		
	3101-2 30% \$70K <b>The total funding available for this entire sub-category is to be capped at \$280K for the program year 2011/2012</b>  Practice code 3101-1 and 3101-2 are not stackable, meaning that applicants may only apply for one or the other	<b>Covered manure storage in combination with methane collection and renewable energy production from collected methane</b> <ul style="list-style-type: none"> <li>• Sealed cover (tent-like structure or self inflated dome or lid) for anaerobic reactors</li> <li>• Floating contact cover (whole sheet) for liquid digester effluent storage</li> <li>• Infrastructure related to pasteurization of applicable imported non-agricultural feedstock</li> <li>• Methane utilization infrastructure such as biogas boilers, co-gen/micro turbine or biogas clean-up and upgrading equipment</li> <li>• Heat exchange system to utilize heat radiated by methane utilization equipment</li> <li>• Assessment, design and construction costs are eligible</li> <li>• Consultant work related to acquisition of discharge permit under the <i>Environmental Management Act</i> and carbon offset verification and validation</li> </ul>	<ul style="list-style-type: none"> <li>• See 3101-1 above for ineligible costs</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>• Prevents produced methane from escaping to atmosphere and moves the carbon from methane form to carbon dioxide form on a 1:1 basis through combustion (by creating a sealed headspace over the manure from which methane is collected for subsequent combustion through boilers, engines etc.. The conversion from methane to carbon dioxide represents a 23 fold reduction in greenhouse gas emissions)</li> </ul> <b>Air Quality</b> <ul style="list-style-type: none"> <li>• Reduces ammonia emission from storage of manure (still need to follow through with improved application technique to realize full ammonia emission reduction)</li> <li>• Reduces odour from storage of manure (odour reduction is approximately equal to % surface area covered). Increases storage capacity (if water is pumped off the cover or if the cover is built to shed rain water, e.g. a dome or "tent-like" structure)</li> </ul>	Nutrient Management Plan (NMP) before access.
	3102 30% \$20K	<b>Engineering design work or technical feasibility studies</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA) or where a feasibility studies is required prior to the implementation of practice code			

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
		3301-2.			
32  Nitrous Oxide (N <sub>2</sub> O) Emission Reduction  Projects must reduce nitrous oxide emissions from agricultural operations by prevention or suppression	3201  50%  \$5K	<b>Improved drainage in corn and forage fields as proposed by a water management plan</b> <ul style="list-style-type: none"> <li>Additions to existing drainage systems</li> <li>Cleaning or repair of existing drainage systems</li> </ul>	<ul style="list-style-type: none"> <li>Drainage work on parcels not currently in intensive forage or corn production</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Prevention of nitrous oxide (N<sub>2</sub>O) emissions (by avoiding nitrification conditions through reduction of time and/or area of water logged soils)</li> <li>Improved crop production conditions</li> </ul>	Water management plan (not an irrigation plan) refer to EFP Drainage Management Guide
	3202  30%  \$30K	<b>Precision farming applications that reduce input application and overlap</b> <ul style="list-style-type: none"> <li>GPS guidance systems</li> <li>On-line field mapping equipment</li> <li>On-line input application control systems guided by high resolution electronic field maps and GPS</li> </ul>	<ul style="list-style-type: none"> <li>Any precision farming applications in areas where field size and distribution, ditch layout and/or lay of land prevent significant utility form using GPS- guided equipment.</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Reduces nitrous oxide (N<sub>2</sub>O) emissions as a result of reduced overlap and higher dosing precision when applying inputs such as fertilizer</li> <li>Reduces agricultural carbon dioxide (CO<sub>2</sub>) emissions (by reducing the use of fossil fuel)</li> <li>Decreased operating costs and less dependence on highly volatile input prices</li> </ul>	
33  Carbon Dioxide (CO <sub>2</sub> ) Emission Reduction  Projects must either reduce agricultural carbon dioxide emissions or reduce the concentration of CO <sub>2</sub> in the atmosphere	3301  up to \$2.5K per plan  limit of one plans per eligible farm operation	<b>Consultative services for on-farm energy efficiency assessment</b> <ul style="list-style-type: none"> <li>Assessments must include the use of "Farm Energy Assessment Tool" created by British Columbia Agriculture &amp; Food Climate Action Initiative</li> <li>Assessment may be carried out by any contracted professional</li> <li>Assessment Tool is available from ARDCorp office</li> </ul>			
	3302 - 1  30%  \$10K	<b>Replacement of fossil-fuel-driven motors with electrical motors</b> <ul style="list-style-type: none"> <li>High efficiency electrical motors</li> <li>Motors must be rated as energy efficient following "Canada's Energy Efficiency Regulations for Electric Motors"</li> <li>Electrical motors to drive existing PTO equipment and other farm machinery</li> <li>Starters, switch gear and equipment required for connection to electrical grid</li> </ul> <b>Additional eligible items for irrigation motors:</b> <ul style="list-style-type: none"> <li>High efficient pumping systems</li> <li>Certified designer has to sign off</li> </ul>	<ul style="list-style-type: none"> <li>Replacement or upgrading of already existing electrical motors</li> <li>Motors not rated as energy efficient following Canada's Energy Efficiency Regulations for Electric Motors</li> <li>Motor supports and shed not eligible</li> <li>Labour for pumps and motor are not eligible</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>Reduces agricultural carbon dioxide emissions by reducing the use of fossil fuel and replacing with electricity</li> <li>Decreases operating costs and dependence on highly volatile diesel prices</li> <li>High efficiency motors will reduce energy consumption</li> </ul>	An energy assessment (3301) will be required after March 31, 2011.  A certified irrigation plan will be required for irrigation motors under this category. Cost of plan is eligible under Category 29

BMP Category	Practice Code (Individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
		<p>on pump efficiency.</p> <ul style="list-style-type: none"> <li>Higher efficiency pump is only applicable if a high efficiency electric motor is also purchased. Pump must be matched to irrigation system specifications as outlined in the certified irrigation plan.</li> </ul>			Cost of assessment covered under 3301
	3302-2 30% \$10K	<p><b>Power line extension for replacement of fossil-fuel driven motors with electrical motors</b></p> <ul style="list-style-type: none"> <li>On farm power line extension to supply high efficient electric motors.</li> <li>Projects eligible only if linked to an eligible project under Practice Code 3302-1</li> </ul>	<ul style="list-style-type: none"> <li>Funding of power line is only eligible as part of costs to convert to electric from a fossil fuel motor</li> </ul>		
	3303 30% \$30K	<p><b>Alternative energy technology (Wind, Solar, &amp; On Farm Hydro) for powering previously fossil-fuel dependant farm equipment and replacement of diesel generators</b></p> <ul style="list-style-type: none"> <li>Wind turbines</li> <li>Photovoltaic solar panels</li> <li>Batteries</li> <li>Electrical conveyance and connection infrastructure</li> <li>Assessment</li> <li>Design</li> <li>Construction</li> <li>On- farm hydro production</li> </ul>	<ul style="list-style-type: none"> <li>Projects that will not be replacing fossil-fuel dependant farm activities</li> <li>Projects designed specifically to generate energy for sale</li> </ul>	<p><b>Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>Reduces agricultural carbon dioxide (CO<sub>2</sub>) emissions by reducing fossil fuel use through enabling electrical power in remote areas without grid access</li> <li>Decreases operating costs and dependence on highly volatile diesel prices</li> </ul>	<p>An energy assessment (3301) will be required after March 31, 2011</p> <p>Cost of assessment covered under 3301</p>
	3304 30% \$50K	<p><b>Replacement of fossil-fuel dependant space heating with renewable heating</b></p> <ul style="list-style-type: none"> <li>Solarthermal infrastructure</li> <li>Geothermal infrastructure</li> <li>Heat pumps</li> <li>Biomass boilers</li> <li>Heat exchangers and heat conveyance infrastructure</li> <li>Warm water tanks</li> <li>Assessment, design and construction costs are eligible</li> </ul>	<ul style="list-style-type: none"> <li>Warm water tanks, heat exchange and heat conveyance infrastructure that will not be connected to a new renewable heat source</li> </ul>	<p><b>Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>Reduces agricultural carbon dioxide (CO<sub>2</sub>) emissions by reducing fossil fuel use</li> <li>Decreased operating costs and less dependence on highly volatile diesel prices</li> </ul>	<p>An energy assessment (3301) will be required after March 31, 2011</p> <p>Cost of assessment covered under 3301</p>
	3305 30% \$30K	<p><b>Low Disturbance Placement of Seed and Fertilizer</b></p> <ul style="list-style-type: none"> <li>Equipment modification on seeding implements for reduced tillage seeding and post seeding implements for low disturbance placement of seed and fertilizer</li> <li>Modifying seeding and post-seeding implements for low-disturbance placement of seed and fertilizer; applicants may claim value of eligible components when purchasing equipment (coulters, openers, trash clearance devices, furrow closers, and liquid or row crop fertilizer banders).</li> </ul>	<ul style="list-style-type: none"> <li>This BMP is intended to provide support primarily through equipment modification; however, a producer may claim the value of the eligible modification when purchasing an entire equipment unit; the cost of the eligible component must be visibly itemized and broken out on the invoice or on a separate invoice. Or the eligible costs will be calculated at 50% of the value of</li> </ul>	<p><b>Climate Change Mitigation</b></p> <ul style="list-style-type: none"> <li>Reduces agricultural carbon dioxide (CO<sub>2</sub>) emissions by conserving soil organic matter</li> <li>Increases agricultural sequestration of ambient carbon dioxide (CO<sub>2</sub>) (if maintained under no-till regime)</li> </ul>	

BMP Category	Practice Code (individual Cost Share & Funding Cap)	Eligible BMPs and Costs	Ineligible BMPs and Costs	Benefits	Linkages to other plans or actions e.g., need for Nutrient Management Plan
		<ul style="list-style-type: none"> <li>• Eligible items include:               <ul style="list-style-type: none"> <li>○ Single disc openers (e.g. coulters), residue clearance devices and additional toolbars as required</li> <li>○ Openers for fertilizer placement on specialized planters and drills</li> <li>○ Cover crop crimper (if part of a one-pass seeding operation)</li> <li>○ Liquid or dry fertilizer placement systems for high residue conditions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• the tool carrier and bottoms (not fertilizer / seed hoppers or cart)</li> <li>• Chaff collectors and chaff spreaders installed on combines</li> </ul>		
	3307 30% \$30K	<b>Thermal energy efficiency improvements that increase insulation</b> <ul style="list-style-type: none"> <li>• Thermal curtains and other dividers</li> <li>• Improved insulation</li> <li>• Management optimization systems</li> <li>• High priority items as specified in an energy conservation plan developed under Category 3301</li> </ul>	<ul style="list-style-type: none"> <li>• Thermal dividers and insulation for structures that are not directly related to agricultural production</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>• Reduces agricultural carbon dioxide (CO<sub>2</sub>) emissions by reducing fossil fuel use</li> <li>• Decreased operating costs</li> </ul>	An energy assessment (3301) will be required after March 31, 2011  Cost of assessment covered under 3301
	3308 30% \$10K	<b>Lighting efficiency improvements</b> <ul style="list-style-type: none"> <li>• Low energy lighting equipment</li> <li>• High priority items as specified in an energy conservation plan developed under BMP 3301</li> </ul>	<ul style="list-style-type: none"> <li>• Low energy lighting equipment for structures that are not directly related to agricultural production (e.g., office or garage)</li> </ul>	<b>Climate Change Mitigation</b> <ul style="list-style-type: none"> <li>• Reduces agricultural carbon dioxide (CO<sub>2</sub>) emissions by reducing the use of electricity (BC is about 90% carbon neutral but with the increased need for more electricity in the future, it is possible that the proportion of carbon dioxide (CO<sub>2</sub>) emitting electricity production will go up)</li> </ul>	An energy assessment (3301) will be required after March 31, 2011.  Cost of assessment covered under 3301
	3309 30% \$30K	<b>Engineering design work or technical feasibility studies.</b> This practice code will stand alone if project does not proceed for economic, technical or environmental reasons (e.g., CEAA) or where a feasibility studies is required prior to the implementation of practice codes 3303 and 3304.			