

Stewardship Practices being developed

SAR Primer Guideline	Stewardship practices	Recommended techniques	Habitat type	Nature of action	Comments
Riparian areas in settled landscapes	Protect existing riparian areas		R, S	A	<p>The riparian areas of both Duteau and Jones Creeks were fenced to avoid access by cattle.</p> <ul style="list-style-type: none"> • “Various areas for wildlife habitat are being preserved; the Riparian areas bordering the creeks are protected from grazing.” • “Fisheries and environment Canada asked for c.a. 45 meters wide riparian areas to be fenced. We gave the full allotment of riparian area.” <p>Riparian areas that were fenced are regenerating naturally due to high amounts of seed rain from nearby forests.</p> <p>There are several artisan wells and water holes for the cattle to drink water without having to go into the creeks.</p> <p>Next to the riparian buffer of Duteau Creek, an area of 5 acres was set aside completely wild because there is a lot of wildlife there.</p> <p>“I could use it for grazing but I prefer to leave it alone. It is interesting to walk through there, but sometimes you can get a bit nervous when you are in a bear trail. There are lots of herons, bears, and deer using this area.”</p>
	Establish new or restore degraded riparian buffers	Plant native vegetation (minding width)	R, S	R	Trees were planted in the riparian buffers of the two creeks that were fenced.
		Protect plantings from wildlife and livestock	R	A, M	<p>The planted riparian areas were fenced and water wells build outside these areas to avoid damage by cattle. However, there is a lot of damage to planted trees due to beaver activity in the Duteau Creek.</p> <ul style="list-style-type: none"> • “I don't know what should have done there but a follow-up from the people that started the project should have been done to define what to do.”
		Install large woody debris	R, S, N	R	<p>Large woody debris was added to the riparian buffers, banks and channels of Duteau and Jones Creeks to enhance habitat complexity and bank stability.</p> <p>Snags are left to provide resources for woodpeckers and bears</p>
		Create pits and mounds	R, S, N	R	Pits and mounds were created in the riparian buffer of Duteau and Jones Creeks in order to achieve greater habitat complexity.
	Create riparian wetlands	N	O	<p>With resources from DFO, a pond (Smoke Pond) was built in the property. This were focused to provide habitat for coho salmon and other wildlife. The riparian areas and the aquatic habitat were planted, wood debris, rocks and pits and mounds were added.</p>	
	Control invasive species		R	A, M	<p>Don says he does not have much problem with weeds due to great grass cover in the understory of the riparian areas.</p> <ul style="list-style-type: none"> • “I manage them in the field but not in the riparian areas. They are growing for some reason and they now have a role in soil protection.” • He thinks that not much work is necessary on weed control because eventually nature will balance this problem when trees grow and shade the weeds. • “Since I am certified organic, my weed management is mostly mechanic. Chemical farming is already too heavy.”
Augment riparian areas with agroforestry or leave strips		R	O	<p>An old pasture adjacent to the riparian buffer of Jones Creek was converted to a forested hay crop field area.</p> <p>This area was fenced with electrical fence and water holes were put out of the riparian area to prevent the access by cattle.</p> <p>Deer has visited the area and also black bears.</p> <p>One of Don's objectives with this is to take the deer out of the hay area once the spawns are usually hit by mowers in that area.</p>	
Drainage maintenance in agricultural waterways	Protect existing riparian areas		R, D, N	A, M	Riparian areas were fenced to avoid access by cattle in the constructed irrigation ditch and the Smoke Pond. Water holes were built to avoid bank erosion by trumping by cattle.
	Conserve, enhance, or restore riparian buffers		R, D, N	R, O	Application of actions to protect and restore the riparian areas of the drainage ditch and pond by planting native species, fencing, and habitat complexing.
	Use sensitive methods to work in waterways	Manual work	R, D, N	A, M	Manual work was used in constructed habitat channel of the drainage ditch and wetlands to avoid over disturbance and release of sediments.
	Stabilize banks using bioengineering methods		R, D, N	R, A, M	Bioengineering interventions aiming on stabilizing erosion were applied to the banks of the Jones and Duteau creeks and on the constructed pond.
	Restore aquatic habitats	Habitat complexing	R, D, N	R	<p>A habitat complexing project was done at the Duteau creek by Lee Hesketh 15 years ago.</p> <ul style="list-style-type: none"> • “They came in and dredged the creek all the way through to create better fish habitat. They narrowed it down in some sections, put a lot of large woody debris and planted all the willows in the riparian area. • “Now we and now we have a lot of new issues with it, especially regarding beaver dams.”
		Constructed wetlands and stream channels			<p>Fisheries and Oceans have constructed an imprinting pond for 50.000 smolts of coho salmon, the Smoke pond.</p> <p>“Right after they built this pond, the herons showed up in the area and it was like a all-you-can-eat buffet for them.”</p>
Avoid over application or poor storage of manure		R, D, S, N	A	<p>Don built a composting plant to manage the organic waste of the farm and use the manure he has available, instead of discarding it.</p> <p>He also has a liquid manure fertilization program. He has a liquid manure pit which is dangerous by design, but is fenced it to protect livestock and wildlife from falling in it.</p>	

* Types of habitats: R = riparian buffer, D = ditches, S = stream channel, and N = novel habitat; **Nature of actions: A = avoidance, M = minimization, R = rehabilitation/restoration, and O = offset.