



Agricultural Riparian Buffer Programs

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- “Filter strip was most effective in reducing sediment, total nitrogen (N), and total phosphorus (P) loads from surface runoff...”

Yuan, Y., R. Book, K. Mankin, L. Koropecj-Cox, L. Christianson, T. Messer, AND R. Christianson. An Overview on Effectiveness of Agricultural Conservation Practices for Water Quality Improvement. *Journal of the ASABE. AMERICAN SOCIETY OF AGRICULTURAL AND BIOLOGICAL ENGINEERS, ST. JOSEPH, MI, 65(2):419-426, (2022).* <https://doi.org/10.13031/ja.14503>



- The efficacy of filter strips is highly dependent on several factors, such as width, slope, runoff intensity.

Douglas-Mankin, K. R., Helmers, M. J., & Harmel, R. D. (2021). Review of filter strip performance and function for improving water quality from agricultural lands. *Transactions of the ASABE, 64(2), 659–674.* <https://doi.org/10.13031/trans.14169>



Conservation Reserve Enhancement Program (CREP)

Vermont's Conservation Reserve Enhancement Program (CREP) is a voluntary program designed to reduce sediment runoff and improve water quality by removing land from agricultural production and establishing vegetative buffers.

The Conservation Reserve **Enhancement** Program (CREP) is a part of the Conservation Reserve Program (CRP) administered by the Farm Service Agency (FSA).



Grassed Waterway and Filter Strip (GWFS) Program

The Grassed Waterway and Filter Strip (GWFS) Program aids Vermont farmers for in-field agronomic best practices to address critical source areas, erosion, and surface runoff.

The Program's goal is to reduce soil erosion and improve soil and water quality on cropland that contributes a disproportionately high level of nutrients in runoff.

Program Comparison

	Conservation Reserve Enhancement Program (CREP)	Grassed Waterway and Filter Strip (GWFS) Program
Use	NOT Harvestable	Harvestable
Entities	VAAFM, FSA & NRCS	VAAFM Only
Practices	Riparian Forest Buffers, Filter Strips, and Associated Grazing Practices	Filter Strips, Grassed Waterways, Critical Source Area (CSA) Seedings.
Timeline	1-2 Year Planning Process	6 months – 1 year

Program Comparison

	Conservation Reserve Enhancement Program (CREP)	Grassed Waterway and Filter Strip (GWFS) Program
Agreement Length	15 – Year Contract	10 Year Grant Agreement
Incentives	Incentive Funding from FSA & VAAFM (\$415-\$2,005/acre)	Incentive Payment (\$500/acre)
Ongoing Payments	Annual Rental Payment from FSA for land removed from production	
Install Cost	USDA FSA and USFWS Partners for Fish and Wildlife (PFW) provide funding for costs, typically 100%	90% of Implementation Costs (6 V.S.A. § 4824)



CREP Project Example –

- 9.6 Acres Riparian Forest Buffer
- 6,850 Feet Fence resulting in 62 Acres of Livestock Exclusion (from Water)
 - Watering facilities, pipeline, and livestock crossing also installed on the farm as part of the project.
- Project Costs - \$98,452
 - \$2,989 State Incentive Funding
 - \$74,527 USDA FSA Install Costs
 - \$11,707 USDA Annual Rental costs (\$780.46 annually for 15 Years)
 - \$949 USDA FSA Incentive
 - \$8,280 USFWS Costs



GWFS Project Example –

- 4 Acres Filter Strips, 18 Acres Field Seeding
 - Previous Land Use – Annual Tilled Cropland
- Project Costs - \$29,650
 - \$17,850 State Funding
 - \$9,990.00 Incentive Payment at \$500/acre
 - \$7,860.00 toward Install Costs
 - \$11,800 Landowner

Project Comparison

	Conservation Reserve Enhancement Program (CREP)	Grassed Waterway and Filter Strip (GWFS) Program
Water Quality – Estimated Phosphorus Load Reduction*	Riparian Forest Buffer - 41.25 kg/acre Fence/ Livestock Exclusion - 8.3 kg/acres	Riparian Buffer - 37.8 kg/acre Field Seeding - 11.4 kg/acre
Cost to SOV	\$3.27 / kg Estimated Phosphorus Load Reduction*	\$50 / kg Estimated Phosphorus Load Reduction*
Cost to Landowner	\$0	\$11,800
Landowner Incentive	\$15,645 or \$1629 / acre	\$9,990 or \$500 / acre
Level of Commitment	15 Years & Buffer Land is no longer harvestable/farmable.	10 Years & Land is still harvestable

*Source load reduction is the estimated load reduction for nutrients leaving the farm field rather than what eventually enters the lake which is called the delivered load.

NRCS Programs for Buffers



- Environmental Quality Incentives Program (EQIP):
 - Filter Strips (\$176 – \$673 per acres)
 - Riparian Forest Buffers (\$1,900 - \$3,000 per acre)
 - Pasture and Hay Planting (\$416 – \$890 per acre)
- Conservation Stewardship Program (CSP):
 - Buffer Enhancements (\$39 - \$544 per acre)
 - Filter Strip Enhancements (\$23-\$70 per acre)

Please note that these are payment rates based on FFY24 EQIP and CSP practice payment rates. Please reach out to NRCS Vermont for the most accurate and up to date rates.



04.16.2008

2008, year of implementation:

stream fenced,
reinforced cattle
x-ing installed,
buffer planted,
water tub is
behind feeder



2009: year 2



2013: year 5



2018: year 10



2022: year 14





“We do it for the turtles” –
Unknown

Thank you!



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