

Stewardship Pays - But Who Pays for Stewardship?

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Stewardship, specifically environmental stewardship, is the act of caring for our natural resources - land, water, wildlife, and air - to sustain, conserve, protect and restore the environment for our generation and the generations still to come. Environmental stewardship pays big dividends in the form of clean water, forage productivity, biodiversity, and water storage, but who pays for stewardship and how much do we owe?

Social or environmental change often begins with a change-maker, a group or individual willing to stick their neck out and be the harbinger of change. The Alberta non-profit organization, Cows and Fish is doing just that. For the past 15 years, Cows and Fish has been delivering change-making messages to Albertans on how to better manage their riparian areas and watersheds.

Floodplains, shorelines and streambanks are collectively called riparian areas. The word *riparian* is derived from Latin *ripa*, meaning riverbank or shore. Riparian zones are the interface between land and water. You can think of them as wetter than dry and drier than wet. These areas, although small in size and abundance, as compared to uplands, are key producers of ecological goods and services. Clean water, abundant forage production, habitat for fish and wildlife, water storage and erosion control are all benefits to society from a healthy riparian area.

Stewardship of riparian areas commonly involves consideration of management. Using agricultural examples, management options vary from extremely simple, such as moving a salt block away from the waters edge, to a complex rotational grazing system designed to optimize forage productivity and sustainability of use over time.

Results of a recent independent evaluation of the Cows and Fish program estimate that 6 out of every 10 agricultural producers working with Cows and Fish make a practice change. Picture in your mind a relatively simple management change - an agricultural producer opts to install a solar powered watering system, pumping water from the stream to an upland location. Ultimately, this will alter the distribution or pattern of grazing on the land – encouraging livestock to spend less time in the sensitive riparian zone. This particular management change is relatively inexpensive in terms of capital costs – but moving back to the original question of who pays for stewardship - can we determine the costs to deliver stewardship messages to that producer which result in these types of management changes?

Recognizing that not all producers change practices due to the influence of some outside organization, but in this case, with this particular producer, let's agree this practice change resulted from interactions with Cows and Fish. Perhaps this producer is a member of a community-based watershed group that has been working with Cows and Fish over the last few years. Our experience has shown that it takes between 3 to 5 years from initial contact for most people to make their first practice change. In those 3 to 5

years this producer may have participated in a long list of community watershed activities with Cows and Fish staff in the categories of awareness, team and tool building, community-based action and monitoring. Examples include presentations on riparian ecology and grazing management, riparian health field days to learn what a healthy riparian area looks like, plant identification workshops and tours of riparian management demonstration sites to learn what's working for other producers. Patience and persistence are key virtues when initiating stewardship on the landscape. Providing a diverse array of mechanisms to promote change, in that time span, to build awareness and encourage, reinforce, and motivate change is necessary.

Annually, Cows and Fish staff interact with approximately 5000 individuals, of which roughly 1200 are agricultural producers. For the 720 producers (60% of 1200) making a management change, approximately \$300.00 is spent on each interaction with each individual to realize that practice change, based on the Cows and Fish annual budget averaged over 3 years. In total, if the producer who invested in a solar watering system, interacted with Cows and Fish 3 to 5 times over 4 years the investment by Cows and Fish is between \$900.00 to \$1500.00. It is impossible to measure the exact value of this particular practice change in terms of the impact on our natural resources and the ecological goods and services provided, but we do know it is likely to have a positive impact. Research shows that healthier riparian areas support more abundant and diverse bird communities, better filter runoff and flood water reducing water treatment costs, and store more water mitigating the impacts of flood and drought. All of these ecological provisions have value to society in both the short and long-term.

Who do we owe for abundant, clean water, maintenance of biodiversity and flood protection? First and foremost, we owe the farmers, ranchers and other land managers who invest time, effort and money to care for the land, water and air which we all utilize on a daily basis. Secondly, we owe conservation organizations, such as Cows and Fish, and their supporters, funding associates and members who invest annually in stewardship. How much we owe is dependent on the value society places on those particular ecological goods and services.

Should organizations, like Cows and Fish, continue to invest in stewardship? Is environmental stewardship a good deal? Are Albertans are getting 'bang for their buck' when it comes to stewardship? The way I see it, long term funding of stewardship programs will be matched by long-term investment in stewardship by landowners with the future generation in mind. The health of our natural resources – grasslands, forests, water, riparian areas, fish and wildlife, depend on it. For more information on the information provided in this article, contact Cows and Fish at (403) 381-5538.