

# **Farmers' Perceptions of Salmon Habitat Restoration Measures: Loss and Contestation**

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## *Executive Summary*

### *Introduction*

In Skagit County, Washington, salmon conservation and growth management measures are coming into conflict with agricultural and private property interests around the issue of riparian buffers. One program that is being enlisted to address the Washington State Growth Management Act and the recent Endangered Species Act (ESA) listing of several local salmon species, is the Conservation Reserve Enhancement Program, or CREP. CREP is a voluntary federal program aimed at restoring agricultural land to address soil and water quality concerns. In Washington state, CREP provides significant financial compensation to landowners with the specific purpose of encouraging salmon habitat restoration.

Environmental Protection Agency (EPA) officials were concerned that fewer farmers in Washington State were signing up for CREP than was anticipated. In cooperation with the Society for Applied Anthropology, they funded an internship for a student environmental anthropologist who would investigate how farmers perceived CREP, and aim to find out why they were not signing up for the program.

The resulting research project was limited in scope, due to time constraints and the enormous complexity of the question. A pilot case study was designed for Skagit County, chosen primarily for its proximity to the researchers' residence. Once research began it became clear that the question of buffers in Skagit County involved many more groups than farmers and landowners, including tribal, recreational and commercial fishermen, environmentalists, scientists, and county officials, to name a few. Nevertheless, given the specific question posed by the EPA, research focused primarily on *farmers'* perceptions. It is strongly recommended that future research engage the perceptions of other groups. Finally, unlike many EPA projects, the research was qualitative and ethnographic, aimed at understanding the complexity inherent in the narratives of a select number of people, rather than at achieving statistical significance through opinion surveys or other ways of characterizing Skagit perceptions.

### *Farmers' perceptions*

Skagit County farmers' perceptions of CREP can only be understood within the context of County buffer requirements. These have been negotiated over the last several years by the State's Growth Management Hearing Board, environmentalists, tribes, agriculturalists, and others, in court cases and public hearings. The main point of contention is the required width of the buffers, with supporters of salmon and habitat recovery pushing for greater widths, and supporters of agricultural and private property interests arguing for narrower widths. Meanwhile, farmers have developed a detailed and multi-faceted opposition to the purported rationales and functions of riparian buffer programs. As one of the options for complying with County requirements, the "voluntary" CREP is subject to many of the same critiques that are made of the County regulations. Also, CREP's significantly greater financial compensation for productivity lost to buffers – more than twice the going rental rate – does not appear to assuage a

certain resentment towards its greater width stipulation: an average of 130 feet, compared to the County's requirement of 75 feet.

My observations of farmers' opposition to regulated riparian buffers center around the themes of loss and contestation. Farmers often first talked about what they thought they would lose as a result of buffer regulations. Collectively, they argued that buffers would result in the loss of land, farm, livelihood, control and food. Some were concerned that loss of land would result in operational efficiency, while others worried they would lose the viability of the whole farm. For most farmers I talked to, financial loss per se was not the problem; rather, it was the emotionally charged possibility of losing one's livelihood, identity, and heritage as a farmer. Several farmers perceived buffer regulations as loss of independent control due to unwanted government intrusion, while others argued that buffers constituted a loss of food production and safety in an increasingly hungry and risky world.

Given the degree to which buffers are understood in terms of loss, it is no surprise that farmers contest them in detail and at length. While most do not oppose conservation in principle, speaking highly of "good stewardship," farmers challenge the rationale and "science" behind the buffer programs. In particular, they disagree with the idea that agricultural activities have significantly impacted salmon populations and should therefore be mediated, they challenge the prediction that re-forested riparian buffers will achieve their intended habitat restoration effects, and they contest the "science" that supports both of these sets of assumptions.

Most farmers argued that agriculture was not the main cause of salmon decline, if at all. Instead, based on personal observations, they believed it was fishing, and in particular *tribal* over-fishing resulting from the "Judge Boldt" decision, that was to blame. In addition, they pointed to the erosion and sedimentation of logging that had taken place in the watershed over the last several decades. Finally, they argued that development, especially in urban areas such as Seattle, had much greater impact on salmon than agriculture. Several interviewees warned that buffer requirements would force farmers to go out of business, and the Skagit Valley would turn into suburban sprawl.

Farmers and landowners also contested the intended functions and effects of riparian buffers. Many predicted, based on personal experience, that buffer strips would become tangled mats of invasive blackberries and reed canary grass that would choke out planted saplings. Others disagreed that forested buffers would provide the cool, oxygenated, fast-flowing water and gravelly stream bottom that is considered essential salmon spawning habitat. Instead, they argued that woody debris would cause streams to begin to slow down, meander, cause more erosion and deposit more sediment. One landowner was particularly worried about the potential "property damage" that would result from increasingly mobile streams. Finally, some farmers and landowners opposed the buffers on aesthetic grounds, calling them ugly, or complaining that they would ruin their view.

Most farmers were indignant that there was “no science” or at least untrustworthy science supporting the buffer policies. They contended, variously, that the government’s scientific studies did not live up to an accepted definition of science, that most of the studies referred to steep forested slopes rather than flat agricultural land, and that the government was not paying attention to alternative scientific studies that challenged buffer rationales. Interviewees discussed science as if it belonged to particular groups, saying things like “our science,” “their science,” or “the tribes’ science.” While a tribal representative and a federal biologist referred to extensive scientific studies supporting buffer policies they also acknowledged that certain aspects of the programs, like the County and CREP buffer width designations, were determined more by politics than by scientific inquiry.

Farmers and landowners readily suggested alternative salmon conservation measures besides buffers. Several ideas were to pay fishers not to fish, remove roads and culverts blocking fish passage, monitor farms for chemical run-off, and initiate a program for schoolchildren to rescue baby salmon caught in side pools. If buffers were to be the solution, then farmers requested that at the least policies took into account site-specific circumstances, such as rewarding organic and other sustainable practices as well as already existing voluntary buffers.

Several farmers contended that buffer regulations had “hidden agendas” and were not really about salmon conservation. Buffers were being required in order to increase government control of land and water, some surmised, and the ESA listings were designed to increase environmentalists’ access to power and money, providing them with jobs and grants. A more common hypothesis was that buffers were part of a larger plan to turn the Skagit Valley back into what it used to be before Euro-American settlement. A quick survey of the environmental literature suggests that this discourse of “reverting back” is in fact not so hidden, with the Skagit River having been designated one of the most promising sites for “landscape-level” restoration by the Nature Conservancy of Washington.

#### *CREP participation*

None of the three CREP participants interviewed were upriver farmers. One delta crop farmer, one upriver landowner and one corporate land manager were interviewed. All spoke highly of their CREP projects and the restoration teams with which they had worked. They were more critical of CREP for being complicated and stipulating questionable criteria, such as the exemption of diked and ditched waterways, or its recommendation to spray herbicides around saplings. They differed dramatically in their perspectives on buffers and salmon restoration in general, however. While the crop farmer strongly criticized salmon conservation as a waste of money and a threat to agriculture, the landowner and land manager appeared committed to ecological and salmon restoration.

#### *CREP Administration*

Finally, conversations with federal and county administrators of CREP revealed that the program is immensely complicated, involving the coordination of three governmental organizations. With the help of a marketing firm, a significant effort has been made to make the program

understandable and attractive to landowners, in the form of a marketing package. The glossy, professional brochures lauding CREP contrast strongly, however, with a County Commissioners' letter to landowners in which CREP is portrayed as the least worst option to meet State environmental requirements. Finally, neither of these outreach documents address questions of why salmon might be declining in the first place, whether and how agricultural activities are to blame, or how riparian buffers are intended to restore salmon populations.

### *Suggestions for Further Research*

1. A first priority for further research would be to interview other groups in the buffer controversy, including tribal members and representatives, commercial and recreational fishermen, environmentalists and scientists, as well as different kinds of farmers, such as other crop farmers, delta farmers and organic farmers. What are some of the cultural, economic, political and historical factors influencing these various groups' involvement in buffer policies and salmon conservation? In addition, more systematic research on who chooses to participate in CREP would be fruitful.
2. The Skagit County buffer controversy calls for a spatial analysis. Using maps indicating farm size, land use, stream designations, soil types, and economic data, for example, one could calculate percentage of total land area per farm that would be taken out by various buffer widths, and predict how much economic loss would result and which farms would be threatened with bankruptcy. A detailed economic analysis of the viability of CREP and CAO buffer specifications for a sample of individual landholders may help with this study. One might also compare the geographic and temporal distribution of processes such as timber cuts, population growth, land clearing, development, and fishing, to flood events, habitat changes, and reconstructed salmon numbers, among other factors. Oral histories and ecological observations of local fishers and landowners could help reconstruct historical land use, habitat and salmon populations.
3. Finally, a more in depth study of the history of how CREP and county buffer regulations originated is in order to better understand the circumstances and rationales leading to the current controversy.

### *Preliminary Suggested Improvements to CREP*

1. Prepare an outreach document directed at all Skagit County residents that outlines in detail the various ways that different groups are addressing salmon conservation, and why. Include, for example, fisheries and development restrictions. This way, each group could see what the others are required to do, and would (hopefully) be able to understand their own "responsibilities" more clearly.
2. Support ways for diverse community members to meet in person in small, safe groups so that they can get to know each other as people and attempt to understand each others' needs. As part of these groups, begin community-based scientific research efforts in which divergent groups work together to produce, and agree on, the "truth" of fishing and

agricultural impacts, habitat restoration effects and possibilities, and other contested questions.

3. Produce a web-based interactive program and/or a brochure with which landowners can perform a cost-benefit analysis of various buffer options based on their specific circumstances, similar to the Environmental Health and Social Policy Center's "Work Pays" website [<http://www.workpays.org>]. Be sure to include a very detailed chart comparing MARP, CREP and other buffer option characteristics, such as rental rate, lease period, compensation details, restrictions and exemptions, etc. Enable users to input variables such as farm acreage, percent of farm in buffers, annual farm income, range of annual income (reflecting good and bad years), and other relevant information.
4. Attempt to be more site-specific in buffer requirements. Reward organic farmers, better farming practices and farmers who have already voluntarily established buffers with narrower required widths and/or greater compensation.
5. Encourage and support organic and other sustainable farming – and fishing – practices as additional measures for salmon, ecosystem and community conservation.

## ***Introduction***

### **Internship Overview**

This internship was jointly funded by the EPA and the SfAA as part of a five-year cooperative agreement made in 1996. As stated in the research contract, the purpose of the Agreement is to "increase the access of policy makers and communities to expertise in anthropology and other social sciences that contributes to the solution of environmental problems."<sup>1</sup> Summer projects are designed to tackle various environmental questions in each EPA region. For the summer of 2001, EPA region 10 (covering Washington, Oregon, Idaho, Alaska, and 272 Indian Tribes) proposed several potential research projects pertaining to farming in Western states. The research presented here focused on the question of how farmers in Washington State perceive the Conservation Reserve Enhancement Program, or CREP.

### **Conservation Reserve Enhancement Program (CREP) Overview**

The Conservation Reserve Enhancement Program (CREP) is a nation-wide program in which states partner with the USDA to encourage farmers and ranchers to address soil and water quality concerns by leasing and restoring agricultural land for 10 to 15 year periods.<sup>2</sup> So far, 14 states use CREP as a way to address specific regional environmental problems. For example, the CREP agreement between the USDA and the State of Washington states that its sole purpose is to "assist in the recovery of salmon species that have been listed as threatened under the federal Endangered Species Act."<sup>3</sup> Two of the more attractive features of CREP for landowners are 1) that it is voluntary, and 2) that it provides significant financial compensation for costs resulting from loss of productive land and for ecological restoration activities.

### **Research Purpose**

EPA personnel are interested in how Washington farmers perceive CREP because landowners are not signing up for the program as rapidly as was hoped. As written in the contract, the specific goal of the internship was as follows:

The purpose of the internship project will be to describe how farmers in selected areas of western Washington view the CREP program, and, in turn, how these views affect farmers' decisions about whether to participate by enrolling their land. Protection of riparian habitat depends heavily on the involvement of private landowners, and a voluntary program with financial incentives would appear, at least on the surface, to offer landowners an attractive alternative to regulatory

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<sup>1</sup> From "Contract Between the Society for Applied Anthropology and Sara Jo Breslow, SfAA Environmental Anthropology Intern", June 21 2001.

<sup>2</sup> For information on the nation-wide CREP program, see the FSA CREP homepage at: [<http://www.fsa.usda.gov/dafp/cepd/crep/crephome.htm>]

<sup>3</sup> "Agreement Between the U.S. Department of Agriculture Commodity Credit Corporation and the State of Washington Concerning the Implementation of a Conservation Reserve Enhancement Program," signed by Gary Locke and Dan Glickman, October 19, 1998.

compliance. To date, however, very few farmers have decided to take part in the CREP program, and this project aims to find out why.<sup>4</sup>

## **Research Site**

The Skagit Valley was selected as a research site and case study for this particular internship because of its proximity to the researcher's residence (Seattle), its large agricultural base, and its ecological richness and complexity.

## **Research Approach**

There are many ways to approach the question of how something is perceived by a particular group of people. Economic valuations, sociological surveys, and psychological analyses come to mind. All of these rely on quantitative assessments. The research presented here was, on the contrary, approached in a predominantly *qualitative* way, in the tradition of anthropological ethnographic case studies (see section on Research Methods, below). Rather than attempting to write an 'objective' story about farmers' perceptions of CREP based on data gathered remotely and/or systematically, I aimed to listen to how a selected number of individual farmers and landowners told their own stories about the topic. In which contexts do they feel CREP is meaningful? Who do they think are the people and groups involved? What do they identify as the crux (or cruxes) of the issue? How do they think the problems have developed, and how do they think they will be resolved? My assumption here is that perceptions are like intricate stories, and that each individual tells a different one.

Understanding the intricate and unpredictable connections between setting, characters and plot necessitates a humanistic, rather than scientific, approach to research. What is lost in statistical significance and precision is gained in insight into the potential complexities and connections of the question that comes from approaching it as a multitude of stories, interpreted from farmers' interviews, agency documents, program outreach materials, as well as scientific reports. All of these are sources for stories, or 'discourse', and all are produced by people, whether farmers, agency personnel, or scientists. Hence none of these sources will be interpreted as being more definitive than any others; as the products of individual people, or groups of people, they all represent particular perspectives -- or instances of what might be called 'situated knowledge' in critical social theory. The story about CREP that I have written here is an interpretation and integration of the perspectives that I gathered from these various sources during a one-month period.

## **Report Overview**

The report begins with a disclaimer regarding the preliminary nature of this research, followed by a section on research methods, and proceeds to a section titled "Results and Discussion." As

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<sup>4</sup> From "Contract Between the Society for Applied Anthropology and Sara Jo Breslow, SfAA Environmental Anthropology Intern", June 21 2001.

mentioned earlier, all sources of information constitute anthropological ‘data’ for this research – including ordinances posted on county websites, interviews with scientists, and conversations with agricultural representatives. Hence, “Background” on the buffer issue, based on a combination of these sources, is included in the “Results” section, as is the longer discussion of “Farmers’ Perspectives,” based primarily on interviews. At the same time, at every stage of research my own perspective influenced directions that the research would take. In other words, research did not proceed without my own, internal ‘discussion’ of the significance of the research results, and an ongoing incorporation of these results into my own ‘situated perspective’. Hence, “Results” and “Discussion” are included together in same section to underscore the point that they cannot be ‘objectively’ separated from each other.

### **Challenges and Limitations**

Due to the compressed time frame allotted for this internship and to the large, complex nature of the question, the research on which this report is based was structured as a *pilot study*. Its aim was limited to assessing the range of perspectives among agriculturalists with respect to CREP and other regional buffer programs, exploring briefly the larger context in which these perspectives took shape, and suggesting avenues for further study. Hence this report is based on preliminary research only and should *not* be considered a comprehensive nor conclusive account of the Skagit County buffer controversy.

This report reflects - and interprets - the views of a *small* number of people who represent only a fraction of the myriad individuals, groups, and perspectives involved in the buffer issue. The people I talked to were all recommended by others as having particularly representative, important, strong, or idiosyncratic perspectives. Many of the people I spoke with were well known and politically active in the regional community. I sensed that many of them had discussed these issues together previously, possibly during meetings or public hearings, since separate interviewees phrased some of their comments and explanations so similarly that I sensed they originated from a common source.

As stated in my EPA-SfAA internship contract, the original focus of this research was to assess how *farmers* view CREP. As I became more aware of the buffer issue in Skagit County, and its political, scientific, economic, cultural, and historical complexity, however, it became obvious that farmers' perspectives constituted only one side of what is a multi-faceted and very heated controversy. To gain a more balanced and comprehensive understanding of the issue, I clearly would need to talk to other groups with interests in the watershed, such as:

- tribal members and representatives
- commercial and recreational fishermen
- environmentalists
- scientists
- county officials
- different kinds of farmers, such as crop farmers and organic farmers.

Finally, the breadth and nature of this report's intended audience presents several challenges. My audience consists of EPA and other federal agency personnel, SfAA members and the scholarly anthropological community, and the range of people I interviewed, including local agency personnel, farmers and landowners, tribal representatives, and people in the county government. How could I gain the confidence of all of these individuals when they each have such strong and divergent perspectives? How could I use language in such a way that it does not privilege one group's way of telling the story over another? How could I present my interviewees' perspectives as faithfully as possible, but also be true to my own interests and values that might be critical of them? Finally, how could I maintain the confidentiality of interviewees who know each other as neighbors and community members? My answer to most of these questions is that of course I could not write a completely balanced report, but I have tried my best. At the same time, since my main subject is farmers' perspectives, their views are explored in greatest depth here. As for confidentiality, I attempted to provide enough information about interviewees so the report would make sense to people unfamiliar with the issue, but would not compromise the identity of the individuals. On the other hand, it is impossible to account for the fact that some Skagit County readers may be able to guess who is behind certain perspectives or comments.

## Research Methods

Fieldwork consisted of meeting or talking on the phone with farmers, in addition to various other people in Skagit County who have an interest, whether supportive or critical, in CREP and/or in the county's riparian buffer plans (see Table 1 for an overview of interviewees). The latter included people in government agencies in addition to several individuals affiliated with county government, local non-profit groups, local tribes, and scientific institutions. By talking about CREP in the general context of riparian buffers and other regional issues, I aimed to assess how widely perspectives on CREP ranged, and to inform myself of the major issues influencing those perspectives.

To identify likely interviewees, I started by contacting people recommended by EPA and SfAA mentors. Each of these initial contacts directed me to other people, constituting a first tier of referrals. I contacted everybody in this first tier and asked each of them for further recommendations, which constituted a second tier of referrals. To narrow down this second tier, I prioritized meetings with people who had been referred to me by more than one person. I also included people who I was told would have a particularly distinctive point of view, in order to get a sense of the range of perspectives on CREP within the agricultural community. In anthropological discourse this common method of data collection is termed a "reputational and positional" approach to interviewee selection.<sup>5</sup>

After preliminary phone conversations with initial contacts I drew up two lists of questions, one directed toward people working in government agencies, and one directed toward landowners.<sup>6</sup> These questions represent the general topics that I attempted to cover in each interview and were intended as guides for conversations that would likely range more widely, or focus more narrowly depending on the particular circumstances of different individuals. Initial conversations helped me predict which kinds of questions might be most relevant to ask, including questions directed

**Table 1. Overview of Interviewees.**

Interviewee Description	Number Interviewed
<b>Upriver Landowners</b>	<b>7</b>
Dairy/Beef farmers	4
Organic farmer	1
Non-farming landowners	2*
<b>Delta Landowners</b>	<b>3</b>
Crop farmers	3*
<b>Agricultural Community Representative</b>	<b>1</b>
<b>Corporate Land Manager</b>	<b>1*</b>
<b>Watershed Mediator</b>	<b>1</b>
<b>Conservation District Technician</b>	<b>1</b>
<b>County Government Officials</b>	<b>2</b>
Former Co. Commissioner	1
County Planner	1
<b>Federal Officials</b>	<b>5</b>
NRCS biologist	1
FSA Administrators	2
EPA mentors	2
<b>Tribal Representative</b>	<b>1</b>
<b>CREP Participants</b> (* indicates one of these is a CREP participant)	<b>3</b>
<b>Total Interviewed</b>	<b>22</b>

<sup>5</sup> E.g. See Henry, Gary T. 1998. "Practical Sampling," in Leonard Bickman and Debra J. Rog eds, *Handbook of Applied Social research Methods*. Thousand Oaks, California: Sage Publications. Pp.447-476.

<sup>6</sup> Interview questions are provided in Appendix A.

at regionally specific issues. They also helped me predict which groups of people would be most relevant to talk to, such as those who might be most opposed to or most supportive of CREP and other buffer plans.

As I became more comfortable with talking to people in general and about the buffer issue in particular, my questions became more frequent, directed, and engaged. Therefore, my first interviews were very open-ended, consisting mainly of my listening, while my later interviews included more questions in which I might pose different scenarios for consideration based on the flow of the conversation. I interviewed a total of 22 people. (See Table 1 for an overview of interviewees.) Interviews lasted from half an hour to 2 1/2 hours. Some interviews took place over the phone. Others took place in people's homes or offices, on walks around property, or in restaurants.

During interviews I requested copies or references of documents that had influenced and informed interviewees' perceptions and knowledge about CREP and/or the county's riparian buffer policy. I also collected website statements and newspaper articles that concerned Skagit County agriculture, buffers, salmon restoration, and other related topics.

By the end of the research period I had many pages of interview notes and documents. Analysis was relatively cursory; the data should be revisited much more thoroughly for future research. Analysis consisted primarily of coding interview notes and some of the documents with words that identified both common and idiosyncratic subject-themes in order to assess the range, diversity, and agreement in interviewee responses. Each paragraph was "coded" with multiple such key-words.<sup>7</sup> During the writing of the report, I scanned keywords to assemble perspectives and quotes for each section, noting evidence for common themes, or, in the language of anthropology, a "sufficiency of pattern" or a "saturation effect" in points raised in the interviews.<sup>8</sup>

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<sup>7</sup> The list of keywords used for coding is provided in Appendix B.

<sup>8</sup> These are terms from the social theory called "grounded theory." See, for example, Strauss, Anselm, and Juliet Corbin. 1990. *Basics of Qualitative Research: Grounded Theory, Procedures and Techniques*. Newbury Park, California: Sage Publications.

## ***Results and Discussion***

### **Background: Buffer Regulations in Skagit County**

#### *The Skagit County Buffer Controversy*

While from a federal perspective CREP may appear to be a voluntary and financially lucrative program, in Skagit County, Washington, CREP's intersection with local ordinances gives it a somewhat more complex reputation. In its attempt to achieve compliance with Washington State's Growth Management Act,<sup>9</sup> Skagit County adopted a Critical Areas Ordinance (CAO),<sup>10</sup> that establishes county fish and wildlife habitat mitigation standards,<sup>11</sup> with special options for agricultural lands.<sup>12</sup> The standards require that 100 or 200 foot riparian buffers are established on all fish-bearing streams, depending on water type. These standard buffers must be vegetated no-touch zones (with some exceptions) but do not have to be actively re-forested. The purpose of the buffers, as stated in the County Code, is to “protect 5 basic riparian functions that influence in-stream and near-stream habitat quality,” including:

1. recruitment of large woody debris to create stream structure
2. shading by a forested canopy to maintain cool and oxygenated water
3. establishing bank integrity, reducing erosion and providing habitat structure
4. protection of water quality by filtering nutrients and sediments in runoff
5. providing wildlife habitat

According to a county planner, the County attempted to exempt agricultural lands from these requirements, but was sued over this exemption by a local tribal organization, the Skagit System Cooperative and a local environmental group, Friends of Skagit County. So the County developed a special option for agricultural lands, called the Managed Agriculture Riparian Plan, or MARP, that would reduce the required buffer width, provide farmers with compensation for lost productive land, and still meet the buffers' functional purposes by requiring that the buffer is actively planted with native species, managed for large woody debris recruitment, and subject to evaluation, adaptive management, and monitoring. (Aside from MARP, farmers have the option of designing their own, custom buffer plan that meets “best available science,” “best management practices,” and the stated buffer functions, but is subject to approval by a Science Advisory Panel. The MARP plan, on the other hand, has already been approved by the county and is so far approved by the Western Washington Growth Management Hearings Board. Enrollment in CREP would also meet county, state and likely federal requirements for wildlife and habitat conservation. Thus it is pertinent to compare the pros and cons of MARP and CREP, as these are the only two plans that are guaranteed to meet government requirements *and* offer financial compensation.)

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<sup>9</sup> See [<http://www.ocd.wa.gov/info/lgd/growth/index.tpl>] for a full text of the Growth Management Act, and updates. See [[http://www.psrc.org/projects/planreview/gma\\_overview.pdf](http://www.psrc.org/projects/planreview/gma_overview.pdf)] for an overview of the Act.

<sup>10</sup> Skagit County Code Chapter 14.24: Critical Areas Ordinance [found at: [http://www.skagitcounty.net/offices/planning\\_and\\_permit/index.htm](http://www.skagitcounty.net/offices/planning_and_permit/index.htm)]

<sup>11</sup> SCC 14.24.530: Fish and Wildlife Habitat Conservation Area Mitigation Standards

<sup>12</sup> SCC 14.24.120: Ongoing Agriculture on Agricultural Lands.

A major local controversy has developed around the questions of which lands will be eligible or exempt from the Critical Areas Ordinance regulations, and how wide the riparian buffer zone will have to be. On opposite sides of the spectrum are, roughly, farmers and property rights activists who wish to *minimize* eligible lands and buffer width, and fishermen and environmentalists who wish to *maximize* eligibility and width.

According to a County planner, the County has adopted six different interim buffer widths since the ordinance process started, ranging from an initial width of 125 feet to a lowest width of 50 feet. Currently, the required MARP buffer width is 75 feet, with 50 feet planted in native trees and 25 feet in grass but free of livestock. The local tribal and environmental groups, supported by the Washington State Department of Fish and Wildlife (WDFW), have sued the County again for requiring a width that they believe is too narrow to achieve their desired conservation goals. The court case is still pending. Meanwhile, a group of farmers called Agriculture for Skagit County (ASC) petitioned for a narrower width of 25 feet of trees and 25 feet of grass that could be grazed intermittently.<sup>13</sup>

With MARP, Skagit County pledges to compensate landowners at the going soil rental rate for the loss of the agricultural land that would constitute the 75 foot buffers.<sup>14</sup> But CREP would compensate landowners at twice that rate, and the money would come from federal sources rather than from the County.<sup>15</sup> Furthermore, while MARP promises to compensate landowners for up to 5 years, at which point compensation will depend on the availability of funds, CREP promises compensation for 10- or 15-year rental agreements. (Documents suggest that both programs would reimburse farmers for the costs of restoring and maintaining buffers for up to 5 years.) The disparity in compensation amount and duration suggests that both farmers and the County have a financial incentive to enroll, or encourage enrollment, in CREP in order to achieve compliance with the Growth Management Act. In fact, the county recently pledged to add a total of \$50/acre/yr as a bonus for signing up with CREP, figuring that it would cost the county less to boost enrollments in CREP than it would to fully compensate enrollments in MARP.<sup>16</sup> (See Table 2 for a comparison of the characteristics of the CAO requirements, MARP and CREP).

The catch, however, is that for Skagit County farmers the buffer width necessary for participation in CREP is likely *wider* than that required by the county's MARP. CREP buffer specifications range from 50 to 180 feet, but in Western Washington they average at 125-135

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<sup>13</sup> For interesting reading on hearings regarding the buffer controversy, see Friends of Skagit County et al. v. Skagit County and Skagit County Diking Districts et al. Compliance Hearing Order No. 96-2-0025 and Skagit Audubon Society et al. v. Skagit County and Agriculture for Skagit County et al. Final Decision Order No. 00-2-0033c at: [[http://www.gmaboards.wa.gov/western/western\\_decisions/ww2000/00-33c\\_96-25c\\_fdo\\_co.htm](http://www.gmaboards.wa.gov/western/western_decisions/ww2000/00-33c_96-25c_fdo_co.htm)] (August 9, 2000) and [[http://www.gmaboards.wa.gov/western/western\\_decisions/ww2000/00-33&96-25\\_comphrgorder2-901.htm](http://www.gmaboards.wa.gov/western/western_decisions/ww2000/00-33&96-25_comphrgorder2-901.htm)] (February 9, 2001).

<sup>14</sup> SCC 14.24.120

<sup>15</sup> USDA-Washington State CREP Agreement.

<sup>16</sup> Skagit County planner, personal communication.

**Table 2. Characteristics of Skagit County Buffer Options.**

	<b>Critical Areas Ordinance (CAO) Standards</b>	<b>Managed Agriculture Riparian Plan (MARP)</b>	<b>Conservation Reserve Enhancement Program (CREP)</b>
<b>Buffer Width</b>	100 or 200 feet, depending on stream type	75 ft, with 50 ft forested required; up to 125 ft will be compensated	50-180 ft, depending on soil type; all forested
<b>Compensation for Land</b>	None	Current soil rental rate	200-210% of the current soil rental rate + \$50/acre/yr
<b>Lease Duration</b>	None	5 years, minimum	10 - 15 years
<b>Compensation for Costs of Restoration and Maintenance</b>	None	Up to 5 years	Up to 5 years
<b>Diked and Ditched Waterways Exempted/Not Eligible?</b>	Exempted for 2 years	Not eligible	Not eligible
<b>Subject to Forest Practices Act?</b>	Likely.	Likely.	No – exempted.

feet, all of which must be re-forested.<sup>17</sup> Unlike MARP’s standardized width of 75 feet, CREP buffer widths vary according to ecological characteristics. Washington State’s CREP Agreement explains: “The minimum buffer width shall be no less than 75 percent of the site potential tree height which shall be defined for most sites as the average height, at 100 years of growth of the tallest conifer species native to the site.”<sup>18</sup> In the Skagit Valley, and indeed in much of Western Washington, that tallest native tree is the Douglas Fir, which can reach 200 feet (75% of 200ft = 150 ft).<sup>19</sup> (Ironically, in Eastern Washington, where farms are generally much larger and spread out along irrigated plains, CREP buffer width specifications are much narrower, restricted by the shorter arid-land tree species.)<sup>20</sup>

The Skagit System Cooperative, a consortium of three local tribes, and the WDFW look to CREP to achieve their salmon and riparian habitat restoration goals. By suing the County, they are attempting to increase the required MARP buffer width until it matches the wider, voluntary, and more highly compensated CREP specifications. Their aim, as one tribal representative (not a tribal member) put it, is to "force the farmers to do CREP."

As of October 2001, the County has not increased its MARP buffer width above 75 feet. As stated earlier, it has presented landowners with several options for meeting the required buffer functions, one of which is CREP. The county has established a November 30, 2001 deadline for

<sup>17</sup> NRCS biologist, Personal Communication.

<sup>18</sup> USDA-Washington State CREP Agreement.

<sup>19</sup> Chaudiere, W. and S. Gouran (preparers), 2000. “General Riparian Buffer Restoration Information & Specifications for Conservation Reserve Enhancement Program (CREP) Projects In Whatcom County.” Whatcom Conservation District.

<sup>20</sup> EPA Personnel, Personal Communication.

landowners to choose one of the buffer options. After that, landowners will be subject to the default buffer width of 100 or 200 feet with no compensation.<sup>21</sup>

In general, according to the farmers I spoke with, if it were not for the county's buffer regulations, CREP, as a voluntary program, would not be an issue. But in the context of regulatory policies concerning buffers, criticisms of buffers extend to CREP. On the whole, its offer of higher compensation does not seem to assuage a certain resentment toward its greater width requirement.

### *Eligibility, Dikes and Ditches*

One of the more intriguing contradictions in the Skagit buffer controversy concerns the diked and ditched waterways in the river's delta region. Once a large estuary, the Skagit delta was ditched and diked by Euro-American settlers in the late 1800s and early 1900s, producing the majority of the cropland in the valley.<sup>22</sup> The tribal representative I spoke with asserted that "agriculture has had the largest impact on salmon in the basin."<sup>23</sup> When pressed, though, he clarified that agriculture's biggest impact has been precisely this diking and ditching of the former estuaries that drained a large proportion of Chinook rearing habitat, in addition to loss of freshwater Coho rearing habitat due to the clearing of riparian vegetation. Yet both the county's CAO and CREP exempt from buffer requirements lands that border diked and ditched waterways ("landward of a dike, levee, tide-gate or pump station."<sup>24</sup>) A county planner told me that the exemptions were made because it was deemed that buffers on these man-made ditches would not benefit salmon, and that the buffers would compromise the integrity of the waterways, by introducing roots and woody debris, for example.

The exemptions effectively restrict regulated habitat restoration on most of this former estuarine land, known as the Skagit delta. As a consequence, the farmers who will likely experience the burden of the County's buffer requirements are those who operate farms on salmon-bearing streams that are *not* ditched or diked. These lands are generally located eastward and upstream of the former estuarine areas, a region known as the "upriver" part of the County. One farmer noted that the designations of "upriver" and "downriver" or "delta" have only become widely used since this buffer controversy arose. Several dairy farmers spoke disgruntledly about "downriver" or

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<sup>21</sup> Letter dated September 24, 2001, and brochure titled "Skagit County Ag Land Stream Buffer Program" (Summer 2001), sent from the Skagit County Board of Commissioners to eligible Skagit County agricultural landowners.

<sup>22</sup> Duncan, Shane. 1998. *What the River Gives the River Takes Away: Dikes, Drains and Life on the Skagit Delta*. Masters Thesis, Western Washington University.

<sup>23</sup> Several documents agree that agricultural activities have had at least a "significant" impact on fish populations, including the USDA-Washington State CREP Agreement, and the "Conservation Reserve Enhancement Program; CREP Fact Sheet", prepared by the USDA in August, 2000. See, however, Linda Nash's "The Changing Experience of Nature: Historical Encounters with a Northwest River" in *The Journal of American History* (March 2000:1600-1629), in which she argues that the construction of dams and powerhouses most significantly altered the river's ecological relationships. She writes, "The dams dramatically altered the river's flow and destroyed salmon-spawning grounds as they made Seattle's growth possible" (p. 1603).

<sup>24</sup> Skagit County letter and brochure; Skagit Conservation District CREP technician, personal communication.

"delta" farmers who were actually producing more of the heat and sediment affecting salmon, but due to political influence had managed to get their lands exempted from buffer requirements. In fact, one dairy farmer suggested that delta farmers had "pushed for wider buffers so that the county would buy off on the plan," before exemptions of diked and ditched waterways could be reversed. The exemptions are currently effective for two years. After that time, according to a County planner, exempted areas must be mitigated by restoring estuarine regions elsewhere. (See the Agricultural Master Map of Skagit County for a visual display of land use geography and stream designations.<sup>25</sup> Note that the town of Sedro-Woolley roughly divides the county's downriver or delta region to the West, from its upriver region to the East.)

Ironically, a very preliminary geographic analysis of the county's agricultural lands suggests that the farms with the least proportion of streamside acreage exist in the delta area, while the farms with the greatest proportion are located upriver - towards the mountains, where the river floodplain becomes increasingly confined between steep valley walls. Buffer requirements would thus appear to take up a larger proportion of land in upriver farms than they would in delta farms, especially with current exemptions of diked and ditched waterways. As one agricultural representative explained regarding upriver geography, "The farms get longer and narrower and stretch out along the river. The buffer requirements will take the farm and put people out of business." From this perspective, the current buffer policy favors wider delta farms and disadvantages narrower upriver farms, indicating why upriver farmers may feel "hardest hit" and are most vocal in their opposition to the buffers.<sup>26</sup> (As noted in my recommendations for further research, a more comprehensive spatial analysis of Skagit geography is necessary before expanding any further on these hypotheses.) According to several delta farmers, however, if buffers *were* required on diked and ditched waterways, they would compromise the water drainage and control functions of dikes and ditches, and, as one farmer put it, "there goes the land." When I told the tribal representative that I was focusing my interviews on upriver farmers because they seemed to be the ones most impacted, however, he was surprised and apparently unaware that the delta region would be largely unaffected by the current buffer policies.

## **Farmers' Perceptions of CREP**

### *Supporting Conservation In General*

Most of the farmers I talked to supported conservation in the agricultural sense, meaning they had personal goals to be good stewards, primarily by conserving healthy soil through crop rotations, erosion prevention, and other measures. Some farmers were also involved in local efforts to preserve farmland by buying up development rights. In general, the farmers I interviewed seemed to take the responsibility of good stewardship seriously. A few times they would criticize other members of the agricultural community for not being as good stewards of the land as they could be.

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<sup>25</sup> The Skagit County Agricultural Master Map is viewable online at: [[http://www.skagitcounty.net/offices/public\\_works/surface\\_water\\_management/SAP/fish-sm.pdf](http://www.skagitcounty.net/offices/public_works/surface_water_management/SAP/fish-sm.pdf)], a 1.8MB file.

<sup>26</sup> Based on personal observation; a county planner concurred.

One dairy farmer gave me the impression that he took a special interest in the human and natural history of his property, and that he was dedicated to conservation of ecological diversity for more than economic or utilitarian reasons. In our walk around the perimeter of his farm, he continuously pointed out places where he had voluntarily and at his own expense fenced in a stream buffer, planted trees, or constructed a wetland where his sons could catch salamanders; and places where he had observed interesting birds, bats, and beavers. He asked me if I would help him identify an unusual plant that he had found growing on his property; he raised rare breeds of domesticated geese and ducks; he recalled the history of the property's homesteader, and, walking across a lumpy field, he proudly told me that it was the original plot and that it had never been plowed. He intended to keep it that way. Yet this farmer was faced with the prospect of going out of business due to the County's buffer requirements.

Farmers were less enthusiastic, though not opposed, to the goal of salmon protection, and salmon habitat conservation. Most agreed that salmon numbers had declined dramatically in recent years and that something needed to be done. Demonstrating an awareness of buffer benefits, many had voluntarily installed varying widths and types of buffers along streams and lakes on their properties. Others suggested they were willing to do their part for salmon habitat conservation (limited to what they deemed necessary) as long as they were justly compensated.

Farmers overwhelmingly disagreed with the particular rationales and specifications behind the CREP and CAO buffer plans, however. They disagreed with the implications that agricultural activities were largely responsible for salmon decline and that buffers 75-180 feet in width were necessary to restore salmon habitat or increase fish populations. In an attempt to deflect the predicted negative agricultural consequences of imminent buffer regulations, several members of the Skagit agricultural community formed a group called Agriculture for Skagit County (ASC) to propose an alternative 50-foot wide buffer, consisting of 25 feet of trees and 25 feet of grass. In addition to being a leverage tool, this counter proposal reflected farmers' appreciation for the conservation benefits of buffers as well as the consequences of ESA listings.

In other words, farmers were not against conservation in general, or salmon conservation per se. Rather than contesting the overall goals of the CREP and CAO buffer plans, they contested the details. The details, such as buffer width and buffer installation requirements, determined what they would lose as farmers.

## ***LOSS***

*"It's like losing your life"* - Skagit County farmer, referring to buffer requirements

### *Loss of Land*

When asked what they thought about the buffer issue, farmers usually first criticized the buffer width. Standing next to a stream on his property, a farmer would indicate how much land would be taken out of production or grazing given the CREP or CAO buffer width requirements. One

landowner predicted the required buffer would constitute "a football field-sized no-touch zone the whole length of the property." Gesturing to where he had some cows grazing, a dairy farmer complained that "the buffer would go out there in my field." Another dairy farmer had me take pictures of fields that represented the equivalent amount of his approximately 250 acre farm that would be taken up by buffers that were 75 feet wide: 40 acres. He suggested that my audience might better appreciate the impact of buffers if they could see what 40 acres looked like.



**Figure 1. A view of 40 acres.**

While loss of productive land was an obvious consequence of buffer installations, farmers explained that it also translated into several other losses. They felt they would lose income from potential crops grown on that land, productivity from land shaded by forested edges, and/or acreage used by grazing livestock. Loss of grazing areas would necessitate keeping livestock indoors longer and importing more feed, either by buying it from someone else or by renting land elsewhere to grow it; or it would require reducing the herd. All of these things would reduce net income and farming efficiency and in some cases would change the way that farmers treated their animals. One dairy farmer commented that keeping his livestock inside for seven months out of the year was not the way he wanted to treat his cows. Finally, several farmers were under the impression that restored buffers would be subject to the Forest Practices Act, apparently unaware that Washington state had recently passed an exemption from that rule for CREP. Conversations with county planners suggested that CAO buffers *would* be subject to the Act, however. (As noted earlier, more research on the origin and details of federal and county regulations would be helpful.)

### *Loss of Farm*

For two of the farmers I talked to, current buffer width requirements would mean more than just the loss of acreage. In their cases, buffers would reduce land base and efficiency so much that they would be unable to stay in business, and would lose the farm itself. Ironically, it seemed evident that these were the two farmers using the most sustainable agricultural practices of all the growers I interviewed. One, an organic farmer, leased just over 10 acres that encompassed three salmon-bearing streams. "There are so many sloughs. With buffers on all of them there would be no farm left," she stated flatly. Her opposition to the CAO buffer requirements has made her feel "estranged and persecuted" by former environmentalist colleagues. She said that what has surprised her is how her views are more like the other farmers in the region than like the environmentalists'. She said that she could "totally relate" to the farmers. The other interviewee

facing the possibility of losing his farm, a dairy farmer, told me that his cows are basically organic, except for the feed that he imports. I assumed this meant that he does not treat his fields with herbicides or pesticides. This was also the same farmer who stated that he did not want to treat his cows badly by keeping them indoors for prolonged periods, suggesting that he cared for the welfare of the cows for more than utilitarian reasons.

The organic farmer was not just concerned about losing her own farm. She explained that she also has a "desperate need" for farms in the Skagit valley to stay in business so she can have access to the companies that supply farm equipment. Less optimistically, a technician working on CREP at the Conservation District predicted that soon agriculture would no longer be viable in Skagit County. (His comments reflect his experience as the son of a local dairy farmer who recently went out of business.) He explained that "agricultural here is huge." Losing it would mean the county loses its tax base - so it would "roll out the red carpet" for industrial development to gain more tax revenues.

Environmental regulations were not seen as the only reason why farmers might be facing bankruptcy. Several people told me that a local food processing facility, National Frozen Foods, had recently moved away from the valley, lowering rental rates and leaving farmers scrambling for alternative buyers. Others blamed farm troubles on the worsening American economy and global free trade. Cheaper, competitive goods are coming from China, Chile, Argentina, and Denmark, I heard. One farmer exclaimed, "Free trade doesn't mean fair trade!" The tribal representative indicated that he was more partial to these kinds of explanations for local farm problems than to environmental explanations. Many people had said that the buffer regulations would put them out of business, but, he said, "this is another story - farmers in the Skagit valley have been struggling for years, even without environmental regulations."

### *Loss of Livelihood*

Despite initial talk of the economic consequences of buffers, when farmers talked about loss, it was not just about money. Ultimately, they were more concerned about the loss of a way of life that they loved, and that for many of them had been passed down through multiple generations. For the farmers, wide buffers translated into loss of livelihood, identity, and history. For this reason, monetary compensation for putting agricultural land into buffers became irrelevant if the loss of that land would mean losing the economic viability of the farm as a whole, and therefore the ability to be a farmer. When asked whether the decision to enroll in CREP was based on economic considerations, several farmers responded that it was "not about money." In other words, they were not in farming for the money, because, as one farmer put it, "farming pays shit." Another explained, "If a guy is farming, it is because he wants to be a farmer. ... we are in it because we love it and this is our life." Thus, while in general a farmer does not choose her occupation for economic reasons, the buffer issue *is* ultimately "a dollars and cents issue" for the farmer in that it must not jeopardize her economic ability to farm.

A representative of the agricultural community explained that most people do not realize that farmers operate on a very slim profit margin, putting "basically 100% of their net worth" on the line for a very small return. "Farmers strive to maximize everything," he told me. "They plant every acre, and minimize every input as much as possible. When something like this [the CAO buffer regulation] comes up, they tend to go ballistic."

"This is probably where the emotion of the landowner comes from," one crop farmer noted. I noticed indignation rise when interviewees recalled the amount of time and physical work that they or their family members had put into cultivating, working, or conserving the land and lifestyle that would be impacted, or "taken" by buffers. One landowner recalled how his grandfather had cleared most of the fields on his property, and after the upstream mountain was logged, worked continuously to reinforce the stream banks with rocks to compensate for their increased susceptibility to erosion, stream meandering, and flooding. Indignantly, he explained that a neighboring landowners' CREP plan threatened to jeopardize much of this work, as it fostered stream meandering that would destabilize banks. Another farmer explained that when conservation proponents started pushing for buffer widths that would take out more land than seemed necessary, "you start to get a bitter feeling."

### *Loss of Control*

For two farmers, who several others in the agricultural community described to me as "right-wing" or "conservative," bitterness regarding the buffer issue stemmed primarily from the interpretation of the situation as a "government taking." Neither of these farmers felt threatened with losing their farm as a result of buffer requirements. Both, however, rejected the government buffer program as an unjustified and covered-up "theft" of land and water rights. As one farmer put it, "the people in Skagit County realize that this buffer issue is nothing to do with saving fish - it's a land and water grab." Another refused to enroll his land in the CREP program, despite other family members' wishes, because it made him feel like he'd been "betrayed," "stabbed in the stomach," and had his "intelligence insulted." (At issue were primarily the specific intended and unintended ecological consequences of the buffer plans, which he, like many others, criticized for being unsupported by scientific evidence, as I will discuss later.) He explained that he had once accepted government support from the Conservation District but since then he had "wised up," explaining that subsidies work against farmers in the long run, making it harder to compete against those who "couldn't have made it" without them. There are also several power and gas line easements running through his property that are "tearing things up." The power company "even wants to cut our prettiest tree and not pay us for it," he said. His comments implied a deep lack of respect on the part of the government for his personal circumstances, knowledge and self-sufficiency. "This is what makes us so anti-government," he said.

### *Loss of Food*

Finally, several farmers were concerned about the fact that buffer requirements would reduce the amount of food-producing land in the region. They were sensitive to issues of world trade, local

food production, food infection and disease, and world hunger. "With local production you can control your food and know where it is coming from," one crop farmer noted. He predicted that with "40%" of our food now imported, "one of these days there is going to be some kind of outbreak," and yet we will not know where the infected food came from. Another farmer explained in an email to me that CREP "provides income on a short term basis, in the form of tax dollars, for landowners who are unable or unwilling to use the land to produce food for an increasingly hungry world." Later in an interview he explained: food is increasingly imported into the United States from countries where it can be produced more cheaply under less stringent or no environmental regulations. At the same time, "50%" of the world's population is malnourished. Yet if those people are growing food for Americans it must have a "bad impact" on their ability to produce food for themselves.

Taking a somewhat different perspective, one crop farmer, who was enrolled in CREP, but critical of buffer regulations, questioned the amount of money and the amount of land being invested for salmon restoration as opposed to food production. "Do we need everything that's in the supermarkets or do we need salmon and nothing else?" he asked.

## ***CONTESTATION***

Given the depth and range of ways in which farmers interpret buffer specifications in terms of loss, it is unsurprising that they vigorously contest both the CAO and CREP buffer plans. As noted earlier, their contention lies less in the ultimate goals of the plans - i.e., salmon conservation - than in the underlying rationales and scientific details (or lack thereof) supporting the buffer plans, and in particular, the required buffer widths. The following section elaborates on this contestation of buffer rationales and buffer science.

### *Contesting the Causes of Salmon Decline –Fishing*

*"Nobody believes that it's the netting that is the problem. They'll say you're racist or that it's in the treaties." - Skagit County landowner*

*"The fact is, people kill salmon. They're tasty." - Skagit County farmer's son*

Most of the landowners I talked to did not believe that agricultural activities or lack of habitat were major causes of salmon decline. Overwhelmingly, they pointed the finger at fishing. While commercial trawling, "foreign" fishing, and recreational fishing were criticized, more often than not, "Indian" fishing and netting were blamed for the dwindling salmon population. In particular, farmers referred again and again to "the Judge Boldt decision" and its consequences as the primary cause of salmon decline in the Skagit valley.<sup>27</sup> One landowner explained: "The Judge

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<sup>27</sup> In the legal case commonly known as the "Boldt Decision" [US v. Washington 384 F. Supp. 312 (W.D. Wash. 1974), aff'd 520 F.2d 676 (9<sup>th</sup> Cir. 1975), cert. Denied 436 U.S. 1086, 96 S. Ct. 877, 47 L. Ed. 2d 97 (1976)], several Pacific Northwest Tribes sought an injunction in Federal District Court to order the State of Washington to protect the Tribes' share of salmon and steelhead runs. The Court ultimately ruled in favor of the Tribes, ordering

Boldt decision happened in the mid-70's, which upheld the Indians' treaty rights. It allowed them to start netting fish again. They were entitled to 50% of the fish but they went overboard. ... They put nets across the mouth of this stream." Another farmer demonstrated with his hands how after the Judge Boldt decision "the tribes" put one net after another across the stream in an overlapping pattern. Several other farmers recalled similar events.<sup>28</sup>

Farmers seemed incredulous that the state did not restrict salmon fishing further in order to protect salmon. One farmer commented that if the salmon are an endangered species, then they should stop being killed. Even a technician working on CREP at the Conservation Service said that he did not understand why the state of Washington does not "cut harvesting." Reflecting the sentiments of most of the farmers I talked to, he exclaimed, "CREP will create habitat but we won't have any fish to use it!" An organic farmer summed up the agricultural community's widely shared perspective on the issue. She agreed that "we need to save salmon," but that "it seems like to save salmon we've got to stop fishing and netting... The tribes and the environmentalists putting the onus on landowners [to restore habitat] are missing the point."

It was especially galling to several people that "the tribes" were so influential in fisheries management policy. One landowner asked in an email, "what makes the tribes the experts? Yes, the tribes have a lot of history with salmon, but they have never had to manage the numbers as there were always more salmon than their primitive [*sic*] methods could harvest." One pair of crop farmers were emphatic: "The tribes want complete control of the land. It's a matter of payback. They want to return to the way the land originally was. They have ... lawyers and casino money. They are the strongest lobbying group in Washington. They want to return the land to swamp, tear out the dikes. It's about power and control." An agricultural representative explained it another way: "What it comes down to is that the tribes have been screwed for years by us white folk - and now, through the Bureau of Indian Affairs and casinos they have enough money to carry their cause. They get some negative backlash. The gringo population isn't used to treating the tribes as equals. We trashed the treaties. The tribes are now able to fight back and the whites don't like that because there are things that will hurt the agricultural community."

At least one farmer was also critical of fishermen in general. "Farmers just want to grow food for America, and to keep their hearts clean," she avowed. "Fish people, on the other hand, try to ramrod their desires through."

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the state to honor their treaty-protected fishing rights, which also means protecting the habitat that supports the fisheries as well as granting tribes up to 50% of the "harvestable catch" of salmon and steelhead.

<sup>28</sup> For written histories of the Judge Boldt decision, see Cohen, Fay G. 1986. *Treaties on Trial: the continuing controversy over Northwest Indian fishing rights*. Seattle: University of Washington Press, and Wilkinson, Charles. 2000. *Messages from Frank's Landing: a story of salmon, treaties, and the Indian way*. Seattle: University of Washington Press.

### *Contesting the Causes of Salmon Decline - Logging*

Several farmers observed that logging of nearby hillsides had changed the hydrologic characteristics of the streams on their property and suggested that this may have had a negative impact on salmon runs. One landowner described how "the mountain up here got logged and wiped out a lot of the watershed... After that the creek would get really high." He explained that the subsequent high flows smoothed out the deep pools in the stream where he used to fish for trout. An organic farmer described how one day she had hiked up a nearby mountain from which she had a view of her farm in the valley below. She looked down and saw a beautiful buffer on her stream. Above it were huge clearcuts - on hills owned by a major timber company - that were logged 5-8 years ago. That caused the river to silt up, and "that is why there's no fish," she explained.



**Figure 2. View of the upriver Skagit valley from Sauk Mountain.**

Farmers were less forceful in indicting loggers for salmon decline than they were fishers, however. Often they would soften their criticism of logging by adding that they had nothing against loggers per se. One dairy farmer clarified that it was the "timber company with the big profits" that was the problem and that the individual loggers were "not the ones benefiting." This was actually in reference to the spotted owl controversy, but illustrates his alliance with laborers in contrast to his criticism of big business.

### *Contesting the Causes of Salmon Decline – Development*

*"The best thing for salmon would be to tear up Seattle" - Skagit valley crop farmer*

While I sensed a certain protection of loggers as fellow land laborers, the farmers I talked to did not attempt to soften their criticism of how urbanites and developers impacted salmon populations. Most farmers argued that farming was better for salmon than development. This was often mentioned alongside predictions that tightening environmental regulations would force farmers out of business, leading them to sell their land to developers, and that Skagit County would end up looking like Kent (a vast suburban industrial/commercial park near Seattle that used to be prime farmland). They often complained of the unfair burden placed on rural people for

salmon protection compared to urban people. One farmer noted that there are no requirements for 75 foot buffers along Lake Union (a large lake bordering Seattle's downtown and four in-city neighborhoods), for example, or restrictions limiting chemical lawn applications, automobile runoff, or other urban stream pollution. Another noted the irony in his observation that the scientists, environmentalists and policy makers who supported the wide buffers came mostly from the city: "The worst streams are in the urban areas, and yet it is those people who are telling us what to do."

### *Contesting the Causes of Salmon Decline - Farming*

Farmers did not just point out how other groups might be responsible for the decimation of salmon numbers and salmon habitat; they also provided evidence for why agricultural practices were likely not the cause, or at least less of a contributor to salmon decline than was assumed on the part of buffer proponents. Usually this took the form of historical recollection. An organic farmer explained that the land in the Skagit delta was cleared 80 years ago, yet she remembers that until about 15 years ago salmon runs in the Skagit River were "hugely abundant." She said, "it doesn't make sense" - i.e., that land clearing was necessarily the culprit. Moreover, she has voluntarily planted 40-50 foot wide buffers on her streams. All the buffer functions - shade, woody debris, pools, a feeding zone - are there, she noted, but "that hasn't brought the fish back." In her case, she explained, "salmon are not there now because of culverts."

A dairy farmer recalled a similar story. As a kid in the early 1970's he remembered that the salmon were abundant. He said that since then, "if anything, people's agricultural practices are better" - there is better waste management, pollution reduction, and greater awareness of the impacts of sprays - but still "you don't see the fish." In other words, he explained, "The environment is better than in the 1970's but there are way less fish." He thought that commercial harvesting was probably the biggest factor influencing salmon numbers.

A technician working with CREP at the Conservation District was similarly unconvinced that agricultural activities were a significant cause of salmon decline. He explained that in the 1900's the Columbia River produced huge king salmon (or Chinook) runs. More than 30 canneries were built along the river, but in 20-30 years only 6 remained viable. This occurred before any dams were built, he continued, and then he asked, "In 30 years did the people who moved here really destroy that much habitat? I don't think so." He said he thinks it was over-harvest.

### *Supporting Buffers in Principle*

While farmers strongly disagreed that farming was a primary *cause* of salmon decline, in general they appreciated the beneficial effects that a riparian buffer along a stream or waterway could have for reducing stream bank erosion, preventing siltation, and in some cases, providing wildlife and salmon habitat. In other words, while they disagreed that agricultural practices were the main cause of failing salmon runs, they were willing to "do their part" to attempt to improve salmon habitat - to a degree - a degree that was often described as having some "common sense." From

this perspective, they supported the principle of buffers in general, but balked at the specific kinds of buffers, and buffer installation plans, that were required for participation in CREP, and were anticipated to be part of CAO regulations.

That farmers appreciated the potential benefits of riparian buffers in general was made fairly clear to me when several of the farmers I interviewed showed me or told me about buffers of widths from 10-75 feet that they had installed voluntarily and at their own expense along streams or lakes on their properties. It was, in fact, first-hand experience from installing these "voluntary buffers" which informed their pointed criticism of the CAO and CREP buffer specifications. In their experience, creating a riparian buffer was a difficult, expensive, and time-consuming process.

### *Contesting Buffer Effects - Invasive Species and Girdling Animals*

One of the first things I would hear from farmers in reaction to the buffer issue was that instead of producing the desired forested corridors, the buffers would turn into swaths of weeds. Most farmers were under the impression that CREP and CAO buffers would be designated "no-touch zones," or, in other words, that active management of the restored area would be prohibited. Farmers believed that this off-limits policy would not work. Several of them had attempted to plant tree saplings in their own "voluntary" buffers, only to see them buried in blackberry thickets and patches of reed canary grass. These "invasive species," in turn, would harbor mice and other animals that would girdle and kill the trees. One indignant farmer declared, "It is not what I have been working all my life for - to convert land to noxious weeds."

In fact, CREP buffer specifications take into account the inevitability of competing species by recommending that newly planted saplings are enclosed in cylindrical tubes -- and that the areas surrounding them are sprayed with herbicides. This may come as a surprise to at least one landowner who assured me that in his attempts to voluntarily establish a forested buffer, he has been "careful not to spray around the stream." A crop farmer who is currently installing a CREP buffer on his property noted the irony of this installation practice. "The whole idea of buffers is to filter the ground," he recalled. But to control the blackberries they sprayed with 2-4D, a

common broadleaf herbicide. "Is this good?" he wondered. The label said that the spray was within EPA regulations. But he concluded that using herbicide seemed to "defeat the purpose or at least the image" of the buffer program.



**Figure 3. A CREP restoration project, in which saplings are planted in circles sprayed with herbicide.**

### *Contesting Buffer Effects - Velocity, Temperature, and Woody Debris*

Several farmers and landowners were skeptical that the CREP and CAO-style buffers, even if they did eventually grow trees, would necessarily produce desirable salmon habitat characteristics. In general, interviewees were aware that the intended effects of buffers were to shade the stream and produce "woody debris." At the same time, they were aware, based on prevailing theory and their own observations, that ideal salmon spawning habitat consisted of cool water flowing rapidly over a gravelly stream bottom. Yet several farmers and landowners thought that woody debris would produce the opposite effect. Several farmers predicted that trees growing along a bank would fall in and create logjams; the bank would erode, and the water would silt up. Furthermore, woody debris would slow the water down, and yet they believed that "velocity" is what keeps the water cool and clean.

One dairy farmer disagreed that forested banks would necessarily cool the water. Interpreting several articles by a physicist and forester at Oregon State University, he told me that air flow was more important than shade in determining water temperature. Contrary to the rationale behind the buffers, he argued, "trees that block air movement will warm the water." He referred in particular to a buffered lake on his property that had little water or air flow and seemed warm.

A farmer's son questioned the logic behind shading streams in the Pacific Northwest, where, due to "climatic patterns," there is only "a small window" from July to September during which "water will warm up in a small, shallow drainage ditch." Furthermore, he continued, "the summer runs in the Columbia aren't the ones endangered. It's the winter runs. So the task is to keep the water cool for a ridiculously short period of time."

One frustrated landowner, who worked as an engineer, was very detailed and specific in his criticism of woody debris. "Fish and Wildlife want logjams in the creek, and their agenda is to make the creek zigzag." But, he explained, a meandering stream would move more slowly and therefore deposit more sediment than a straighter stream, reducing the likelihood of fast-flowing and gravelly conditions - which is where he has observed spawning salmon. Second, "if the creek zigzagged you wouldn't be able to get stable banks to grow trees, so the water would be in the direct sunlight," he said. "There will be more creek in more sunlight for a longer time," he reasoned, with the implication that water temperature would therefore rise. Third, "logjams would slow the salmon down." He said he thinks that the way the stream is now - straighter, with less debris - means that the salmon "can come up better." Finally, he noted that a meandering stream creates side pools where "hundreds of thousands of little salmon die every year because they get into these ponds and then get stranded when the ponds dry up." According to this landowner, if the ultimate goal is to provide effective salmon habitat, then by advocating woody debris, Fish and Wildlife "contradict themselves." A biologist with the NRCS acknowledged that woody debris could lead to stream meandering and that "a certain part of society doesn't want it to wander.... It's a huge conflict."

### *Contesting Buffer Effects - Danger, Aesthetics, and Property Damage*

In addition to criticisms that the planned buffers would actually degrade salmon habitat, several farmers worried that the buffers would threaten the local human environment. One farmer wrote in an email that the CREP buffer program "provides corridors for dangerous predators such as cougars, which will come more easily into otherwise developed areas where children and pets could become prey." Later he complained that "if 100 feet of trees are here ... our quality of life is gone - such as our view." Another landowner, who had nearly finished building and remodeling two large, Victorian-style houses built on the flood plain (like many others in the valley), was extremely nervous about the potential "property damage" that might result from log-jam-induced flooding and bank erosion due to a CREP buffer that was being installed on a neighbors' property. He also objected to the plan for aesthetic reasons. He felt that the buffer design did "not fit in



with the natural surroundings that are already there." Large swaths of burlap had been draped over a high, eroded bank, and 50 logs were going to be cabled into the side of the creek opposite his father's home - and view. "And this would be ugly," he said.

**Figure 4. A CREP bank reinforcement project that a landowner objects to for aesthetic and functional reasons.**

### *Contesting the Science - Our Science; Their Science*

*"It feels like you're being pulled by strings from above by people who have no clue as to what's going on. They don't come out and LOOK at the actual situation. They don't examine it, or do any research. It feels like people are pulling stuff out of thin air in order to SCREW YOU." -- Skagit County dairy farmers' son*

*"We gotta get the truth out." -- Skagit County dairy farmer*

"There is no science behind why the buffer should be more than 15 feet! It's politics. There is no science that says the fish need these massive buffers," exclaimed one dairy farmer, reflecting the views of most of the farmers I spoke with. Many called for studies examining buffer effects on local agricultural land that would at least justify, or disprove current buffer width requirements. They complained that the current specifications were based on studies designed for steep, forested slopes. "Some of their science is coming from the hills," one dairy farmer explained. The group actively opposing the county's buffer width requirements, Agriculture for

Skagit County, or ASC, attempted to rectify this perceived situation by hiring an environmental consultant from Seattle to help devise a buffer width that would produce the desired buffer functions for flat, agricultural land. (As mentioned earlier, they came up with a figure of 50 feet, consisting of 25 feet of trees and 25 feet of grass.)

One dairy farmer was especially persistent in critiquing the buffer width specifications for their lack of legitimate scientific support. He handed me photocopies of a document titled "Part Nine: Best Available Science,"<sup>29</sup> which he told me was part of the Washington State Administrative Code. He pointed out that the code defined "science" by six criteria, but that none of the county's "stack of scientific studies" met all six points. He showed me a thick bound volume which he said consisted of the list of scientific studies regarding buffers, salmon habitat, water quality, litter requirements, sedimentation, etc. that "was produced by some government agency." "The majority of these studies are someone's opinion," he said. "They are not field tested. They are written down and then that's a study. There is no actual field science that justifies the buffer requirements." He complained that the studies had not been replicated and that some were based only on models. Furthermore, he said, most government agencies relied on these same studies. He handed me copies and references to several alternative studies that apparently contradicted the science behind CREP. These were entitled, for example, "Cattle grazing and riparian zones can coexist, says OSU study"; "Interactions of cattle and chinook salmon"; and "Riparian shade and stream temperature: a perspective."<sup>30</sup>

While this particular dairy farmer was characterized by several others in the agricultural community as "kind of an extremist" and "in-your-face," he was not the only farmer who contested the science behind the CREP buffer specifications. An organic farmer faced with the loss of much of her farm (who implied she might be on the opposite end of the political spectrum) also called for further scientific research. "What justifies or proves that that much land will really do something for fish?" she demanded. "I challenge the science!"

What came as a surprise was that two people who suggested they were influential in shaping CREP's buffer width requirements admitted that the width specifications had little scientific support. A federal biologist explained that there was an attempt to "get an agreement from all agencies on the buffer width" but it did not work. Instead, the US Department of Agriculture's Farm Services Agency (FSA) "made the final call" in order to move forward with the process of implementing CREP." Hence, he acknowledged, the buffer width standards were determined politically, with "not much science." A tribal representative also criticized the program on this point. He emphasized that in order for CREP to work, it needed to be based on scientific data.

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<sup>29</sup> See the full text of the Washington Administrative Code, Part Nine: Best Available Science, at: [<http://www.ocd.wa.gov/info/lgd/growth/bas/index.tpl>], located on the Washington State Office of Community Development, Growth Management Program website, "Best Science" page.

<sup>30</sup> Bob Rost, 2001. "Cattle grazing and riparian zones can coexist, says OSU study." *Oregon State University News & Communication Services*, 12 Jan 2001; Teena Ballard, 2000. "Interactions of Cattle and Chinook Salmon." Master's Thesis, Oregon State University. Presented 11 May 2000; L. Larson and S. Larson, 1996. "Riparian Shade and Stream Temperature: A Perspective." *Rangelands*, 18(4), Aug 1996.

But he showed me a quote from a meeting of the Scientific Advisory Panel in which it was noted that the buffer width determination was "basically arbitrary." He observed that "the problem with CREP is that some of the numbers got made up."

Several landowners have taken the initiative to propose, and in at least one case conduct their own scientific studies. The dairy farmer described above had compiled responses from his own socioeconomic survey of Eastern Skagit County farmers and landowners into a report titled, "Economic Farm Value Lost Result of Skagit County's 75 Foot Buffers On Ag Lands." In the report he listed the owner, type of farm, and numbers for "Total Acres Taken"; "Land taking value, Fencing costs, Planting costs"; "Economic cost to replace feed per/yr"; "Hardship, herd reductions"; and "Other Economic losses to community." He summed up the quantitative results, and assessed that "the loss of every 100 milk cows results in a 1 million dollar loss to the local economy." Included was a section questioning "how one could put a value" on "Loss of Farm, livelihood and dreams," as well as loss of water and constitutional rights. His concluding sentence read, "The farmer must be saved first then the farmer will save the farmland if the government will let him."<sup>31</sup>

One landowner said he always wanted to do a research project of some kind about the salmon conservation issue if he had the time. He suggested looking at old newspaper articles and talking to local fishermen in order to reconstruct salmon numbers for the area, although he seemed confident of what the results would show. He said that he "firmly believes" that the Native American harvest has had the biggest impact on salmon. "If you go back to around the Judge Boldt decision in the mid-70's you might find editorials about how the decision was going to negatively impact salmon runs," he suggested.

The tribal representative I spoke to denounced these kinds of ideas regarding tribal harvest as "patently false." Reminding me of the farmer who handed me a large volume of white papers, he took a heavy stack of scientific articles down from a shelf to emphasize his point. The Skagit System Cooperative has done lots of studies, he explained. For example, they tested whether the Boldt decision may have affected Chinook escapement. While he acknowledged that too many fish *were* caught in the one or two years immediately following the Boldt decision, the study had concluded that even if there had been no decision, current annual Chinook escapement numbers would only be greater by 300-400 fish. He said that, on the other hand, the studies had "absolutely demonstrated that the ability of the river to produce fish has declined." He showed me a Power-Point presentation produced by the Western Washington Tribes and the Washington State Department of Fish and Wildlife, that summarized much of the scientific evidence supporting current theories regarding salmon harvest and habitat. He noted that it was very difficult and expensive to get the numbers for the presentation. Finally, he commented that he hoped he had "put that issue to rest," or in other words that his data had compelled me to reject the farmers' notion that tribal harvesting was to blame for salmon decline.

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<sup>31</sup> [Author not revealed for confidentiality], 2001. "Economic Farm Value Lost Result of Skagit County's 75 Foot Buffers On Ag Lands", compiled March 2001.

Various interviewees talked about "science" as though it "belonged" to themselves or to different groups. At one point during my interview with several dairy farmers, one participant in the conversation remarked, "The tribes know *we have good science*, but they have tried to prevent us from getting it into the record." A technician working with CREP referred to something he called "the tribes' science." He was explaining that the tribes and the Department of Fish and Wildlife were critical of CREP because the Farm Services Agency and the Conservation District were "basically not doing it their way." But, he said, "CREP has certain rules and regulations. If it goes against *the tribes' science* there is not much we can do about it." It appeared that the various groups involved in the buffer controversy each reached to the methods and language of "science" in order to legitimate their divergent perspectives.<sup>32</sup>

### *Landowners' Alternative Suggestions for Salmon Conservation*

Having contested ideas that agricultural activities had damaged salmon runs and that riparian buffers would significantly improve them, farmers were generally happy to suggest alternative ways to restore salmon populations. One landowner proposed a program in which school kids would walk up and down the creeks and net out the little fish that would otherwise get stuck in the side pools. He argued that this kind of program would probably save more salmon than CREP. A dairy farmer suggested that the agencies "pay the guys to not fish for a few years." Others argued for removing or changing culverts and roads to release blocked streams and estuarine regions. Several questioned why the government did not just buy the land it wanted to put into buffers. An organic farmer suggested planting buffers on the side of the stream where they would shade the water more and shade the crops less. She also suggested instituting programs to monitor chemical run-off from farms in order to assess whether buffers were adequately filtering pollutants. Most farmers called for at least a more site-specific approach to salmon restoration. The organic farmer, for example, felt that buffer width requirements should take into account her efforts to use sustainable practices.

### *Suspicious of Hidden Agendas*

Several farmers were unconvinced that the new buffer programs were only about salmon restoration. Two dairy farmers explained to me that they felt the buffer programs were really about the government "taking water rights away from the individual because water is power. They want to control the water so they can do whatever they want. Once you get control of the water you can control the people." One of the two farmers pointed out that water was going to be the next big world issue. He had heard a report about water issues on a local NPR radio station and told me I could order the tape.

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<sup>32</sup> Before starting this research a conversation with my mentors at the EPA anticipated this kind of strategic use of science. I had mentioned that one of my academic interests was in the "anthropology of science", explaining that this could mean studying scientists as a cultural group, or science as a cultural phenomenon. My mentors caught on right away, finding this a rich area for exploration. For a few minutes they discussed how a program's call for "best science" might sometimes be a "delaying tactic"; that "science" that people disagree with might get labeled "bad science"; and finally, one of my mentors commented, "'Best science' -- as if that's the truth."

Another farmer talked more generally about the hidden agenda behind environmental regulation. He said it was about "power and money." He granted that in the course of their operations, environmental groups "might occasionally do something" for wildlife conservation, but that he had seen the salaries of the heads of some of these organizations. More specifically, regarding salmon restoration he explained, "All these people who advocate saving salmon - a worthy program - don't want to quit killing them. Because if they quit killing them they won't be able to keep them on the Endangered Species List and then their money dries up. They don't want them de-listed. It's their most powerful weapon. They have to make money." He believed that getting - and keeping - salmon on the Endangered Species List was a very conscious decision. For example, he said, "The Department of Fish and Wildlife and NMFS make a lot of money on licensing for off-shore fishing, ... so this gives them a conflict of interest. They make money by keeping the fish endangered in order to get the claim to save them."

A more common perception was that the buffer regulations were part of a larger hidden agenda to "revert back" to "the way it used to be," or in other words, to restore a pre-agricultural ecosystem in the Skagit Valley. In particular, one landowner noted, it seemed as if the buffer specifications were designed to facilitate stream meandering. In notes for a meeting with a CREP technician he wrote, "it seems to be that what 'they' want is for streams to erode and go into 'zig-zag' patterns using the theory that a zig-zag gives more lineal footage of stream than a straight line." His notes recorded that the CREP technician had agreed that this is what "'they' want and that 'they' aren't being honest with people about it.'" Curiously, the people referred to as 'they' were not identified in these notes. This landowner also referred to 'they' several times in our interview. When I finally asked him who 'they' were, he said, "Native Americans," and later referred also to the Department of Fish and Wildlife.

A crop farmer was also convinced that the ultimate goal of buffers was to "turn it back the way it was 200 years ago." The landowner and the farmer felt, however, that this was an unrealistic goal. "There is a lot of history on this river," the landowner said - logjams were removed, dams were constructed, tulip fields were planted, houses were built, and towns grew. The crop farmer, from the delta area, reminded me that ditches were dug and dikes were built. "In order to return the salmon to the 'crazy' numbers they used to be you would have to pack up the whole Northwest and replant it back into what it was 150 years ago, then wait 100 years" he exclaimed, with the implication that this would be a ridiculous proposition. He concluded, "Man has had his impact and he is here to stay."

The suspected "hidden agenda" of reverting back to a pre-agricultural landscape does not seem very hidden in the current environmental discourse. A recent issue of *Washington Wildlands*, The Nature Conservancy's regional magazine, for example, quotes the Conservancy's Skagit River area manager stating that the goal of the organization in the Skagit Valley is to "protect ... all of the species and natural processes in the watershed. This is a truly landscape-level

project...'<sup>33</sup> An environmental scientist I spoke with reflected the sentiments of several other environmentally-minded individuals and groups that I took note of during the course of my research. He argued that the Skagit Valley was one of the last places whose natural ecosystem was still intact enough to have a chance to be fully restored.

A farmer recalled something similar, though came to different conclusions. He had heard that ten rivers in Western Washington had been designated highest priority for restoration and that the Skagit River was "number one."<sup>34</sup> Why was the ecosystem still so healthy, he asked? "Because it has been managed by rural people living on it." He acknowledged that the management had "not been perfect" and there had "been some atrocities." But, he explained, city people trying to manage rural environments would be like him, as a farmer, trying to run Microsoft - he wouldn't know what to do.

### **CREP Participation**

Given how vehement opposition to the CAO buffer requirements can be, evident in some of the comments above, it comes as no surprise that none of the three CREP participants that I interviewed were "upriver" farmers. While I did not systematically survey all Skagit County CREP enrollees (a proposal for further research), only one of the three participants I interviewed was a full-time farmer. He is a "delta" farmer, whose fields border the Samish River. The land immediately adjacent to the river is "scrub grass" and "not great farmland." After much deliberation, he determined that he could "make more money by putting this land into CREP than in farming." Enrollment in CREP was "strictly a dollars and cents thing" and "not a conservation thing" for this farmer. He said, "some people bitch about the government, but they can help you, too." He kept track of government programs that offered financial rewards. Besides, he admitted, he "doesn't mind getting money for CREP" because he "probably deserves it." The government "takes away so much," he explained.

Aside from this crop farmer, for whom CREP "happened to fit," almost all of the other people I talked to suspected that CREP would not be a viable program for full-time farmers in Skagit County. Many saw it as a financial support for people who want to "get out of farming," as an agricultural representative put it, because it "pays well" and "reduces a farmer's work load." CREP administrators at the Farm Services Agency confirmed that so far very little of the land enrolled in CREP has been agricultural land. It has just been "land that people own." Very few of the CREP participants were "tied to the land as producers." On the whole, agency personnel and farmers explained that landowners were "waiting" to see what the outcome of the court case would be, and see some kind of stability in the buffer issue, before deciding to enroll in CREP, whether for obligatory or voluntary reasons. As of July, 2001, 16 Skagit County

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<sup>33</sup> McAllister, Pamela, 2001. Saving the Heart of the North Cascades. *Washington Wildlands; The Magazine of The Nature Conservancy of Washington*. Vol. VI, No. 2, Spring/Summer 2001.

<sup>34</sup> He was likely referring to a report released July 10, 2001 by the Trust for Public Lands that identified ten Puget Sound rivers as the best candidates for effective salmon restoration, with the Skagit River as the largest, most productive, and most promising one.

landowners were enrolled in CREP, but "there will be more sign-ups coming soon," agency personnel predicted, as people recognize it as the most lucrative way to deal with county buffer regulations.

Neither of the other two CREP participants I spoke with were farmers. One was a landowner with full-time salaried job and a degree in environmental studies. She was spending considerable time and money restoring most of her fields, where she used to graze a few sheep, to native plant and trees species. She was attempting to improve habitat for her stream's spawning salmon, which she claimed had been badly impacted by logging and hydrological changes on neighboring property. In her understanding, CREP improves not only salmon habitat but also other wildlife habitat, oxygen conditions (i.e. by increasing trees and respiration) and the environment in general. "Every tree planted in the Skagit is an improvement," she said.

The third CREP participant I talked to was actually a forester by training who managed timber and agricultural lands for a major corporate landowner in the region. Acting on his own conservation principles, he had encouraged his employer to enroll some grazing land bordering a large river into CREP in order to create fenced buffers and "keep cows out of the creek - like they should be." He explained that the purpose of the buffers is to "provide large woody debris to restore stream function." With landholdings in the United States and abroad, the income derived from this relatively minuscule CREP project was insignificant to the landowner.

The experiences that these three people have had creating and maintaining CREP buffers highlight some of the benefits and problems that full-time farmers might face if they were to participate in the program. All three seemed pleased with their buffers. The delta area crop farmer thought his buffer would look "kinda neat" and be "like a park." He benefits financially from rental payments and has been fully compensated for the costs of planting and maintaining the buffer. While he called CREP "kind of complicated," he had no complaints about his personal experience with the program. Working with restoration crews had been "great." But despite the fact that he benefited personally, he had strong objections to the larger goal of salmon habitat restoration, and the enormous costs and drastic land use changes that its proponents were willing to undertake. He pointed out that to plant trees along his "little stretch of river" cost \$20,000. "This is astronomical," he noted. He said he hoped it would do something for salmon restoration, since, as he put it, "this amount of money would buy a lot of salmon." Furthermore, he contended that there is "a battle going on with saving salmon and agriculture." He said that "they" want to take out dams, which would stop barge traffic. "What are those salmon worth?" he asked. "Something needs to suffer. Should it be fish or people?"

In contrast is the landowner who aims to restore most of her property to native species. She does not spray around seedlings, and she and her partner estimate that they have spent a combined total of 325 hours per year mowing and in other ways maintaining the buffer site. Furthermore, in the first few years of participation she suffered a net financial loss; the \$200 per acre per year offered in compensation was not enough to cover the costs of planting and maintenance. She complained that CREP did not make its goals clear, and that she did not like its

“convoluted bureaucratese.” Also, she said, “it's confusing because you don't know who you're dealing with because there are two agencies - the FSA and the Conservation District ... it's real iffy.” On the other hand, she “made some good contacts” working with local restoration crews who she described as “excellent.”

The corporate land manager's experience was unique in that he did not have to worry about any financial consequences of the program. Also, he was extremely well versed in the technicalities of CREP, as he sat on the board of the Skagit County Conservation District, which is one of the agencies that administers the program. Like the others, his highest praise went to the restoration and maintenance work that in his case was being done by a local tribal company. His main complaint about CREP was that there had been delays in receiving compensation of up to \$20,000 for this and related work. His employer “can afford” the wait, but he worried that other people who were less financially secure might not be able to. He was also critical of the recent Forest Practices Act exemption that was passed for CREP, which allowed landowners to harvest and/or clear trees in the buffered areas after the 10-15 year lease periods. He said he “couldn't imagine going to all this work and then cutting it down.” It would seem like a “waste of money” and it “doesn't make sense.” He predicted that the exemption would not last. He was also frustrated with the fact that diked and ditched waterways were not eligible for CREP. In this case the landowner volunteered to pay out of pocket in order to install a fenced buffer along a diked portion of the river. Finally, as a Conservation District board member, he was concerned that CREP may not be a welcome program for farmers. Towards the end of our conversation he strongly recommended that I talk to dairy and beef farmers to understand their perspective. He explained that “the dairy guys are really hit hard with the waste management plans,” and are now facing imminent buffer requirements. “You'll get an earful,” he said.

### **CREP Administration and Outreach**

CREP works through the coordination of three organizations. The federal Farm Services Agency (FSA) is responsible for the administrative paperwork; the county Conservation District drafts and implements a restoration plan; and the federal Natural Resource Conservation Service (NRCS) reviews, and if appropriate, signs off on the technical quality of the plan. According to personnel at the FSA, the administration of CREP is “very complicated and time-consuming” - more so by far than any of the 30 other programs they oversee. First, “there are lots of administrative items to keep in order” and “it deals with lots of money so you need to be careful.” Second, the federal FSA must coordinate closely with the Conservation District, a state-sponsored farmers', landowners' and citizens' group, and “procedurally things are done very differently” between the two institutions. It took about a year until the relationship worked “smoothly.” After an hour discussing some of the complicated details of the program, the two administrators I talked to said that we had only touched the “tip of the iceberg.” One of them was specifically responsible for digesting this complexity and explaining the program to landowners. “Hopefully we're doing our job well enough that they won't get overwhelmed by it,” she said.

The Conservation District spent a year developing an outreach plan to present CREP as an attractive program for farmers and landowners. According to a technician working at the Conservation District, CREP has been advertised in their quarterly newsletter, in local papers, at displays at the county fair, and even in a few radio spots on a local station. In addition, the conservation district worked with a marketing firm, Desautel Communications and Marketing, to produce a collection of outreach materials including professionally designed videos and brochures to be used at presentations and in mailings.

One mailing, dated May 4, 2001, included a letter from the Skagit County Board of Commissioners addressing “potentially eligible property owners” regarding the buffer requirements, a plain brochure detailing the various options for meeting those requirements, and a colorful brochure explaining CREP. It is interesting to compare how these documents, in addition to the original USDA-Washington State CREP Agreement, present the buffer issue differently. For example, while the Agreement for CREP states simply that the purpose of CREP is to “assist in the recovery of salmon species that have been listed as threatened or endangered species under the federal Endangered Species Act,”<sup>35</sup> the brochure introduces CREP as a “new tool for landowners” that “enhances and protects water quality, fish habitat and stream stability” and “can protect and add value to your land.”<sup>36</sup> According to the Agreement, CREP’s main function is salmon recovery, whereas the brochure suggests its purpose is the enhancement of streams for the benefit of landowners, in addition to fish.

In contrast, the county’s letter presents county buffer policy as an unfortunate necessity to comply with federal and state environmental regulations, and to avoid “even greater intrusiveness and higher costs.” The Board of Commissioners write, “We fully understand the uncertainties and frustration many property owners may have with this new law intended to balance the County’s desire to maintain the viability of the local agricultural industry with the state requirement to maintain and enhance salmon habitat according to ‘Best Available Science.’”<sup>37</sup> In a later letter, dated September 24, 2001, CREP is presented as the least worst option for landowners to address the county’s ordinance. Noting that CREP is federally funded, the letter urges landowners to choose CREP, offering the incentive of an additional county-sponsored \$40/acre/year signing bonus. The letter explains that the commissioners believe that it is in the “best interest of all County taxpayers” to use county money to promote enrollment in CREP rather than fully compensating an equivalent number of county-funded MARP projects.<sup>38</sup> Here, the reason for buffers as well as for CREP has boiled down to legal compliance and economic efficiency. Absent is any reference to salmon recovery, agricultural impacts, or ecological functions of buffers.

In fact, none of the documents included in these mailings (the official CREP agreement was not part of the mailings) explain why salmon populations are declining, how agricultural activities

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<sup>35</sup> USDA-Washington State CREP Agreement.

<sup>36</sup> “Skagit County Ag Land Stream Buffer Program” (Summer 2001).

<sup>37</sup> Skagit County Board of Commissioners letter dated May 4, 2001, sent to “Potentially Eligible Property Owners.”

<sup>38</sup> Skagit County Board of Commissioners letter dated September 24, 2001, sent to “Agricultural Landowners.”

may have impacted them, or how re-forested, riparian buffers would help improve conditions for salmon in the Skagit valley. While presumably they have been discussed in public hearings and other outreach activities, these, it appears, are the questions that need to be negotiated.

The county's strategy appears to be working, however, since as of November 7, 2001, about four months after research into this question began, 71 people have enrolled in CREP while only 3 have enrolled in MARP, and 6 in other buffer plans.<sup>39</sup> Nevertheless, many landowners have not enrolled in any plan, waiting, according to county planners, and like several of the farmers I spoke with, for the outcome of the current court case, and to see whether and how strongly the buffer requirements will be enforced.

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<sup>39</sup> Skagit County planner, personal communication.

## ***Suggestions for Further Research***

1. As stated earlier, a clear first priority for further research would be to interview other groups in the buffer controversy, including tribal members and representatives, commercial and recreational fishermen, environmentalists and scientists, as well as different kinds of farmers, such as other crop farmers, delta farmers and organic farmers. What are some of the cultural, economic, political and historical factors influencing these various groups' involvement in buffer policies and salmon conservation? In addition, more systematic research on who chooses to participate in CREP would be fruitful.
2. The Skagit County buffer controversy calls for a spatial analysis. Using maps indicating farm size, land use, stream designations, soil types, and economic data, for example, one could calculate percentage of total land area per farm that would be taken out by various buffer widths, and predict how much economic loss would result and which farms would be threatened with bankruptcy. A detailed economic analysis of the viability of CREP and CAO buffer specifications for a sample of individual landholders may help with this study. One might also compare the geographic and temporal distribution of processes such as timber cuts, population growth, land clearing, development, and fishing, to flood events, habitat changes, and reconstructed salmon numbers, among other factors. Oral histories and ecological observations of local fishers and landowners could help reconstruct historical land use, habitat and salmon populations.
3. Finally, a more in depth study of the history of how CREP and county buffer regulations originated is in order to better understand the circumstances and rationales leading to the current controversy.

## ***Preliminary Suggested Improvements to CREP***

A few ideas based on this preliminary research are to:

1. Prepare an outreach document directed at all Skagit County residents that outlines in detail the various ways that different groups are addressing salmon conservation, and why. Include, for example, fisheries and development restrictions. This way, each group could see what the others are required to do, and would (hopefully) be able to understand their own "responsibilities" more clearly.
2. Support ways for diverse community members to meet in person in small, safe groups so that they can get to know each other as people and attempt to understand each others' needs. As part of these groups, begin community-based scientific research efforts in which divergent groups work together to produce, and agree on, the "truth" of fishing and agricultural impacts, habitat restoration effects and possibilities, and other contested questions.
3. Produce a web-based interactive program and/or a brochure with which landowners can perform a cost-benefit analysis of various buffer options based on their specific circumstances, similar to the Environmental Health and Social Policy Center's "Work Pays" website [<http://www.workpays.org>]. Be sure to include a very detailed chart comparing MARP, CREP and other buffer option characteristics, such as rental rate, lease period, compensation details, restrictions and exemptions, etc. Enable users to input variables such as farm acreage, percent of farm in buffers, annual farm income, range of annual income (reflecting good and bad years), and other relevant information.
4. Attempt to be more site-specific in buffer requirements. Reward organic farmers, better farming practices and farmers who have already voluntarily established buffers with narrower required widths and/or greater compensation.
5. Encourage and support organic and other sustainable farming – and fishing – practices as an additional measure for salmon, ecosystem and community conservation.

## ***Appendix A: Interview Questions***

The following questions were intended as general guides for open-ended interviews. Thus all questions were not necessarily asked of all people, and questions were not asked in this order. This open-ended approach was intended to encourage interviewees to lead the conversation to topics that they deemed most significant with respect to the buffer issue, and to discourage the researcher from leading the conversation based on presuppositions.

### **Landowner Questions**

#### **Background**

- How long have you lived in Skagit County?
- Where in the county do you live?
- Are you a farmer? Full-time?
- (If NO: What do you do? /What else do you do besides farming?)
- What kind of farm do you have (crop, dairy, etc.)? What kind of crops do you grow? Organic?
- How big is your farm?
- How did you get into farming?

#### **Landowner Landscape**

- What are some of the major issues you are dealing with now as a landowner/farmer (National Frozen Foods, Critical Areas Ordinance, going out of business, etc.)?
- Do other landowners have similar issues? What are some of the other kinds of issues that landowners in the region are facing?

#### **CREP Awareness**

- Do you know about CREP? How does CREP figure into your priorities right now?
- How did you learn about CREP (neighbor, agent, web, flyer, etc)? IF DOCUMENT: would you mind if I took a look at the flyer/letter/etc.? IF PERSON: What did they say about CREP? Do you share the same perspective as them, or do you have a different perspective? Why?

#### **CREP Participation**

- Are you signed up with CREP?
- If YES:
- Why did you choose to sign up for CREP? What factors did you weigh in making your decision (e.g. financial, topographic, long-term plans for land, conservation values)? What do you see as the benefits of CREP? What are the drawbacks? What has been your experience with CREP implementation process? Is CREP working for you so far? Why/why not?
- If NO:

- What made you decide not to sign up with CREP (financial, topographic, values)? If financial - FSA thinks this is a financial incentive - why not for you? Could you help me understand your perspective - e.g. your operating expenses?
- STILL THINKING ABOUT IT?
- What would make you decide about CREP one way or the other (Critical Areas Ordinance or forest designation issues resolved, e.g.)? What aspects of CREP are you uncertain about?
- OTHER (if not already mentioned):
- Are you concerned about what will happen at the end of 15 years (when lease is up)?
- Are you concerned at all about government 'takings'?

### **CREP Origin/Purpose/Goals**

- Why do you think CREP got started as a program?
- What is the overall purpose of CREP in your opinion? What do you think are some of the specific goals of CREP?

### **Regional Conservation**

- Do you think there is a need for riparian habitat restoration in this region? Salmon protection? Why/why not?

### **CREP Effectiveness/Success**

- Do you think CREP is a good idea? Do you think it is an effective way to achieve its goals? Why/why not? What would make CREP (more) successful, in your opinion?
- How are other government programs trying to promote conservation? What do the various government programs look/feel like from your perspective as a landowner (work together, confusing, annoying, etc.)?
- Do you think habitat conservation/salmon restoration could be achieved in a better way? Who should participate in resolving environmental problems? What role do you think the government should play in conservation, if any?

### **Overview of CREP 'Players'**

- Is it possible to give me a sense of who is generally involved in CREP -- i.e. major groups (e.g. different kinds of landowners, tribes, non-profit groups, agency groups, etc.)?
- What do you think are some of the major issues regarding CREP for these groups [e.g. salmon harvest, forest designation, Critical Areas Ordinance, buffer width, etc.]?

### **Contact Recommendations**

- Would you be able to recommend other people to talk to (landowners, agency folks, others) about their perceptions of CREP?

### **Your Questions**

- What kinds of questions would you want to ask agency personnel or other landowners about CREP?

### **Anything Else?**

- Is there anything else you think I should know about CREP at this point that would give me a better insight into how it's working for people?

### **Agency Personnel Questions**

#### **CREP - Origin/Purpose/Goals**

- Why is CREP being implemented in Skagit County? How did CREP originate as a government program? What is the purpose of CREP? What is it supposed to achieve?

#### **Specific Involvement in CREP**

- How is the agency you work for involved in CREP?
- How are you specifically involved with CREP? What do you do in particular?
- How long have you been working on CREP?
- Are there any documents/any data that you refer to in particular when working on CREP? Do you think they would be useful for me to get a better idea of what CREP is all about? Would I be able to access those or look at them?

#### **Employment/Educational/Personal Background re: conservation/agriculture/etc.**

- How did you come to get involved with CREP/conservation? Do you have a background in agriculture/conservation, etc.? Previous employment/education?
- Do you have personal interests in agriculture/conservation/restoration?
- How did you become interested in agriculture/conservation/restoration, etc.?
- Do you think your background influences the way you perceive CREP?

#### **CREP Success**

- Do you think CREP is succeeding? Why/why not? What do you consider to be successful/not successful about it?

#### **Overview of CREP 'players'**

- Is it possible to give me a sense of who is generally involved in CREP -- i.e. major groups (e.g. different kinds of landowners, tribes, non-profit groups, agency groups, etc.)?
- What do you think are some of the major issues regarding CREP for these groups (e.g. salmon harvest, forest designation, Critical Areas Ordinance, buffer width, etc.)?

#### **Landowner-specific**

- How do you think landowners, specifically, feel about CREP? Do different kinds of landowners perceive CREP differently? What factors might influence the way a landowner feels about CREP?
- What priority would you say landowners give to CREP? What are some other major issues Skagit County landowners are facing now (e.g. National Frozen Foods, etc.)?

**Outreach**

- Does this job involve outreach, even if only informally?
- What kinds of things do you do to let landowners know about CREP, and to encourage them to sign up?
- Are you targeting particular kinds of landowners, or particular geographic regions?
- What factors are eligibility/prioritization based on? Biological? Who did work? Were farmers involved? Any controversy re: assessment results?
- Have your outreach activities changed since CREP started? Do you think these changes have made a difference?

**Future**

- What is the future outlook for CREP? For regional habitat restoration?

**Contact Recommendations**

- Would you recommend other people to talk to (landowners, other agency folks, others) about their perceptions of CREP?

**Your Questions**

- What kinds of questions would you want to ask landowners or other agency personnel about CREP?

**Anything else?**

- Is there anything else you think I should know about CREP at this point that would give me a better insight into how it's working for people?

## ***Appendix B: Coding Keywords***

Following is an example of the kinds of keywords that were used to code interview notes.

## Buffers - General

- buffer issue overview
- buffer width
  - acreage currently in buffers
- buffer policy
- buffer costs
  - loss of land
  - loss of livestock
  - loss of income
  - financial expense
- buffer goals/effects/impacts
  - invasive species
  - girdling animals and beavers
  - zigzagging streams
  - buffer aesthetics
  - woody debris/logjams
  - hidden agenda
  - reverting back
  - wildlife habitat
    - dangerous
- buffer restoration/maintenance
  - invasive species
  - plantings
  - mowing
  - spraying
- other buffer-related programs
  - Critical Areas Ordinance
  - Ag, Fish, Water process
  - CRP
  - (Growth Management Act)
- buffers on ditched/diked waterways
- voluntary buffer practices

## Cities

### Common Sense

### Conservation and Environmentalism

- endangered species
- environmentalists
- alternative conservation suggestions
- education

### Court Case

### CREP

- vision
- administration

- context
- demands
- as confusing
- Freedom of Information Act
- administrative process
- awareness of CREP
- reasons for CREP
- reasons against CREP
  - no touch zone
  - Forest Practices Act
  - land's future uncertain
- CREP buffer plans
- impacts of CREP buffer
- compensation
- CREP outreach
- eligibility
  - agricultural production
  - dikes and ditches
  - salmon-bearing streams
- CREP as a source of income/money
- history of program
- CREP participation
  - farmer
  - non-farmer
- forcing CREP

#### Data

- numeric/value data
- maps
- documents

#### Development

- zoning laws

#### Ecology

- local ecological observations
- history of local ecology

#### Economics

- local economic context for farmers
- global economic context for farmers
  - world trade
- money
  - wasting money
- making a living off land

#### Endangered Species Act

- avoiding takings

habitat conservation plans

## Emotion

### Farming

generations farming  
current top priorities  
farming practices  
    organic  
    pollution/run-off  
working the land (knowing the land through working on it)  
farming as identity  
farming history  
    clearing land  
land quality  
soil type  
rental rate  
making a living off land  
stewardship (being a good/not good steward)

### Fish

fishing/overfishing  
fishing policy  
fishing rights  
fishing seasons  
fishing restrictions  
fisheries management  
history of fishing  
    Bolt decision  
farmers relation to fish  
hatcheries

### Food

valuing food  
knowing where it comes from  
food security  
hunger  
local food production  
food producing land

### Forestry

logging  
    impacts on streams

### Geography

### Government

stream jurisdictions

### Habitat

### History

of Skagit ecology  
of farming  
of fishing

Bolt decision

International Context

“foreign” fishing  
“foreign” agriculture

Interviewee Personal Characteristics

character sketch  
description by others  
political identity  
political participation  
life history  
occupation

Other Groups

Perceptions of other groups  
farmers/ag community  
agency personnel/bureaucrats  
EPA  
Conservation District  
Washington State Fish and Wildlife  
county government  
federal government  
tribes  
racism  
scapegoating  
urbanites  
rural people  
American society  
me/EH&SP  
Questions for other groups  
farmers  
agency personnel/bureaucrats

Other Stories

consequences of CRP  
New York drinking water watershed  
Klamath water controversy  
Zimbabwe farm workers

Politics

decision made politically

Property

property damage  
private property

- property rights
- government takings

Referrals

Research Issues

- Freedom of Information Act
- confidentiality

Salmon

- Impacts on,
  - logging
  - climate
  - predators
- agricultural activities
  - land clearing
  - diking, ditching
  - pollution/run-off
- fishing
  - netting
  - trawling
- development
- mining
- land use practices

Numbers

- history of,

Habitat

hydromodification

Ecology

- life history/life stages

Chinook

Coho

Science

- scientists
- local research initiatives

Setting/Location

- Upriver/Downriver
- delta
  - dikes and ditches
- geography
- history of farm
- farm type
- farm acreage

Skagit County

- overview of issues in,
- history

salmon conservation in,  
Skagit River

Water

as the current issue  
control of,  
water quality  
Clean Water Act

Other Categories

Dams

Responsibility

Ethics

Sense of Place