

White Paper on Columbia River Salmon Gillnet Communities

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This White Paper is about the community and communities of Columbia River gillnet fishermen that have been experiencing life with fewer salmon and are facing life without salmon. Defining a “community” in a fishing context is a bit confusing. It is frequently described as an “occupational community,” which could be broken down into gear type, e.g. trollers, seiners or gillnetters; on the other hand, a fishing community may also be a the location where fishing families live. National Standard 8 of the Magnuson-Stevens Act, which regulates fisheries management in the U.S, states: “fishery conservation must take into account the importance of fishery resources to fishing communities, with the goals of providing for the “sustained participation” of those communities in fisheries and minimizing “adverse economic impacts” as much as possible. “1 The Columbia River gillnet community is both an “occupational community” and a community based in various lower C. R. locations.

The fishermen’s culture is egalitarian in nature, extending well back into the 19th century. Immigrant fishers arrived from a variety of countries, and formed communities. “Fishermen are fiercely competitive while fishing, but they overlook animosities to band together to maintain the fishing grounds by pulling snags or debris such as logs that might foul their gear. They form “snag unions’ to spread the cost of the equipment and the diver needed to pull snags, and to divide up the labor inherent in such work...Members of the drift developed rules, so that no one fishermen could take advantage of another; for example, lotteries or “drawing numbers” determined who laid out the first net...Gillnetters of different ethnic origins, politics and religions learned to compromise and cooperate as a unit to maintain access to the resource.” 2 The two basic dynamics, co-operation and competition, were driven by the value of equity of access.

Today’s fishing businesses operate on portfolios of permits. Each portfolio provides a suite of options, such as a Bristol Bay or Cook inlet gillnet permit; a troll permit; halibut quota; an Alaska herring permit or a crab or coastal razor clam permit, to name a few. Most fishers own more than one permit and participate in multiple fisheries. Permits are bought and sold, often with the assistance of permit brokers such as Dock Street brokers in Seattle, which list a wide variety of permits available. Brokerage firms are part of a fisheries buffer system, in that they meter out quotas and access to fish. Like an investment portfolio, which may include stocks, bonds, pensions, or real estate, a permit portfolio is a means of fishing business diversification, reducing risk and increasing resilience. As in any investment, risk tolerance is a factor when purchasing a permit. A Columbia River permit is valued as a way of spreading risk, allowing a fisher to fish two places, C.R./Willapa, or C.R./Grays Harbor. Limiting options, as has occurred over the past 2 decades, creates more risk, with the obvious end being all risk but no reward.

Fishers employ intense risk management strategies to spread risk. If run sizes are not favorable, one can fish another permit in a different fishery. A fisher may have more than one boat to fish more than one

area. Fisheries such as razor-clamming may not require a vessel. Another risk-reducing buffer is rural pluralism. Most fishermen have other fisheries or occupations, e.g. boat repair or net mending, to fill in gaps between seasons. Occupational pluralism reduces risk by providing alternative ways to make a living. It relies on diversification and long-term thinking as risk-management strategies. A more recent risk is climate change but there is little information available about potential risks to actual fisheries. One possibility is that as water gets warmer, fish will more likely inhabit deeper and cooler water. What will the effect be on the kinds of fishing gear that will be utilized to harvest surpluses? What gear or fishing method could become obsolete, due to its lack of ability to be pro-active in finding those places, or because it is located in shallow warmer water? Catch and release policies for recreational fisheries that depend upon survival of released wild (unmarked) salmon, may need to be revisited as warmer water increases mortalities in such fisheries. In terms of carbon footprint, what fisheries are the most efficient in capturing fish with the least carbon emission? The U.N. Food and Agriculture Organization (FAO) has been dealing with these issues for nearly a decade, as well as the potential for food insecurity if fisheries and fishery infrastructure are not encouraged to be more resilient. 3

The economic and geographic diversity utilized by holders of permit portfolios spreads risk and fosters resilience in fishing-related communities. It also provides connections over multiple fisheries, where family members might find a future opportunity as crew. Fishing in different locales also provides a sense of abundance, which translates into commitment and advocacy for fish. Fishing is an occupational identity with its own customs and rules, both unwritten and written. “In order to successfully adapt to constant change, gillnetters developed a culture of memory, with a strong oral tradition that relied on passing down traditions through generations of extended families. In our technological age it is difficult to imagine an occupation that has no technical manuals, no policies and procedures except broad general legislation refined by occasional administrative rules. Young fishermen learn the craft by watching others, asking questions, and by experience.” 4 Fisheries permit portfolios may provide a conservation benefit. An owner can choose where to fish, and usually will choose a locale where a good-sized run is projected, which reduces fishing pressure in areas with less attractive forecasts.

A publicly owned or “common property” resource belongs to the one who catches it – when there is competition, information management among fishers about where and how to catch that resource is closely held. Fishermen have found ways to manage the fishing process to provide equity and promote co-operation. Equity and co-operation are highly-regarded values. Besides the territoriality of drift rights, information sharing is also a means of fishers managing access to the resource. Radio groups, especially in Alaska, are partnerships where various fishers share information with their cohorts, but withhold information from competitors, as they do not want them to know how much fish one caught and where. Information is considered proprietary and controlled by the family or group.

I began documenting Columbia River fishing community statistics in 2005 to better understand the social makeup of Columbia River gillnet fleet communities. To summarize my findings: 5

- ◆ Over two thirds of licensed Columbia River gillnetters live in four lower river counties: Wahkiakum, Pacific and Grays Harbor, in Washington; Clatsop County in Oregon. The remainder live along the river, or in scattered locales throughout the two states and Alaska.
- ◆ A Columbia River commercial fishing business depends on a Columbia River gillnet permit plus a portfolio of other permits from multiple gear types and several states, including Oregon and

Washington shrimp, crab, razor clam, troll, seine and trawl gear, and numerous Alaska permits. The money from these other endeavors returns to the Columbia River region where fishermen live. For example, in 2003, a year of low salmon prices, Columbia River gillnetters in a sample of four Alaska fisheries (Bristol Bay gillnet, Prince William Sound gillnet, Cook Inlet gillnet and Kodiak seine) brought in \$3,989,863. This figure does not include multipliers, but is simply ex-vessel, and represents only these four select fisheries. The actual income from non-Columbia River permits owned by Columbia River fishermen may have been much higher, but was elusive due to confidentiality issues or lack of data.

- ◆ The income brought in by these businesses came to an area with significant negative social and community health statistics, due to high poverty rates. The four counties all ranked in the lowest per capita income field of \$14,000-\$19,600 according to the 2000 U.S. Census. Mortality rates were also significantly higher than state rates. Other indicators, such as adult and juvenile alcohol violations, child abuse, drug use and adolescent suicide rates were all higher than corresponding state rates, sometimes double or triple. The age of death of fishermen in Wahkiakum County averaged 65, 10 years younger than the average age of death of a U.S. white male. As Jill Wasberg noted at that time, there was a large increase in meth labs and drug and alcohol use. 6

Community issues in 2005 included reduction in incomes, lack of fishing time, uncertainty over future fishing issues, and community instability, due to ESA listings of salmonids and declining runs. Increased allocation of fish to the recreational sector, thus downgrading the value of the Columbia River permits, and the lack of understanding of the needs and problems of rural areas by a largely urban-oriented recreational fishing population in the I-5 corridor were all cited by fishermen I consulted as reasons to reconsider their commitment to the Columbia River fishery and its communities.

In 2014, I updated the study to note the increase in food banks since the 2005 study was done. I have now updated the numbers up into 2021. 7

2014 – Wahkiakum County – 3	2021 -- 5
2014 – Pacific County – 9	2021 – 8
2014 – Grays Harbor County – 17	2021 – 21

These numbers should be thought of as minimums, as other food sources such as summer school food programs and meals offered by service groups augment the regular programs. The growth in food banks demonstrates both community resilience and the desperate plight of residents of these counties. The term “food insecurity” is popular these days, but I prefer to use the term hunger.

The most recent income numbers I have found are from 2019, before Covid. Per capita income, Wahkiakum County, \$38, 915; Pacific County, \$28,109; Grays Harbor County, \$27, 210. Washington State, per capita income, \$41,521. All three counties are below the state per capita income. In terms of poverty rates, Wahkiakum County was at 10.9%; Pacific County 15.4%; Grays Harbor County, 17.3% (third highest in state), Washington State rate, 10.3%. All three counties show higher poverty levels than the state rate. 8 Wahkiakum County’s showing is the best, probably due to its proximity to the Interstate 5 corridor and employment options. Recent numbers show that fishing workers represent the deadliest occupation in the U.S., 145 per 100,000, which may explain my original finding that the average age of death for males who commercially fished was lower than the national average by a decade.9 A 2016 report showed the life expectancy in the 19th District, where the majority of the fishermen live, was shorter than state life expectancy. Deaths by suicide are higher than state rates. 10

The background of these numbers is expressed in graphs in a WDFW document, *Trends in Salmon Runs Over Time*, prepared as a basis for discussions regarding license reduction in the commercial fishery, April 28, 2020. The dramatic changes shown in catches/value after full implementation of Policy C-3620 after 2016 drew back the curtain on what was occurring in the gillnetter communities suffering from a stunning reversal of their fishery and its value in a condensed period of time. Grays Harbor County in particular shows a steep drop in fishing participation. It is unlikely to be a coincidence that it is the county with the state's third highest poverty level. 11 Further, the Washington State *Evaluation of Policy C-3620* states that "The large economic benefits for both commercial and recreational fisheries expected from the Policy were not observed during the implementation period. Commercial Select Area enhancements and alternative gear development have not replaced mainstem fisheries." It also states that "Overall, the commercial fishery saw a decrease in ex-vessel value... 12 Those decreases and lack of success of Policy C-3620 accrued to one of the poorest, most-socially challenged regions in the state. There is a direct line between WDFW policies and poverty, and those consequences cannot be ignored.

The economic dynamics in these communities are also changing. As stated, fishing businesses operate with portfolios of permits, but each business has a home base. For the majority of C.R. gillnet fishers that home base was the four counties previously mentioned. However, that demographic pattern is changing as fishers rely less and less on the restricted and re-allocated C.R. fishery for a major portion of their income. Fishers who brought home substantial incomes from other fisheries, including distant-water fisheries such as Alaska, are reconsidering participating in or investing in the Columbia River as part of their portfolios. Washington State is currently attempting a buyback of C.R. permits. A recent study, *Alaskan Fisheries, Commercial Fisheries and Local Economies*, indicates that "Local permit ownership creates an opportunity for fishery earnings to be spent locally on goods and services, in addition to hiring local crew members – who in turn are also more likely to spend their earnings locally. This creates an induced effect in the local economy." The study found that local commercial-fishing permit owners had a significant positive effect on their local economies, and that place of residence of a fishing operator achieved benefits that were not achieved by the place where the fishery actually took place. The takeaway for management strategies? "Our findings add support to the idea that place-based policies...must be tailored to local conditions...Thus, depending on local conditions, some communities may benefit from policies that favor local processing businesses and/or enhance forward-and-backward linkages across sectors, while others may benefit from policies aimed to attract or retain resident fishery permit owners. In other words, context matters when designing policy." 13 Retention of Columbia River permits is dependent upon access to the resource; failure to provide that access will cost the State more than just income from the Columbia River. It will also result in fishers leaving the area, along with their income from other states. As one of the informants for my 2005 study stated, "Unless things change, this will be the last generation of fishermen who make their homes here." 14

To provide perspective to these numbers, it may be helpful to look at other west coast states where fishers hold permits, particularly Alaska. Columbia River fishermen began fishing in Alaska in the 19th century when they sailed from the Columbia River north, acting as crew on board the cannery-owned sailing vessels. They unloaded the freight upon their arrival at the cannery, fished the season and then acted as crew again on the journey home. With the construction of dams on the Columbia River in the 20th century and the accompanying steep drop in salmon populations, Alaska fisheries became the replacement for Columbia River summer chinook, and the voyage north in the summer became the norm. The pattern developed of fishermen having their home base on the Columbia and going to Alaska and bringing their earnings home. 15 Their home base was rooted in the Columbia River fishery. That

pattern existed until fairly recently. Fishermen have long been aware that when salmon runs in Bristol Bay are low, salmon runs on the Columbia tend to be high and vice versa. Their observations were verified in a study by Nathan Mantua et al., which clearly demonstrated the relationship between the two locales. 16 Permits in the two locales allow fishermen to spread risk, offering a choice of fishing venues depending upon which is more likely to be the most productive in any given year. Elimination of the gillnet summer fishery on the Columbia closed any summer option for a C.R. gillnet permit, forcing the fisher to look elsewhere. The Columbia River is sometimes considered as a “starter fishery,” with fairly low threshold costs and the opportunity to create a permit portfolio as the fisher gains experience. As opportunities have been closed or highly restricted, that function has been largely eliminated. The decline of the SAFE areas, a place where younger fishers could crew or learn the fishing business, has exacerbated this situation.

Preliminary Statistics from the Alaska Commercial Fisheries Entry Commission (CFEC) indicate that in 2020, residents of Washington State who fished in Alaska for salmon (957 permits) produced gross earnings of \$175,786,667. The total revenue from all permittees from Washington in all Alaska fisheries (1537) was \$400,942,02. Those permittees from Oregon fishing for salmon in Alaska in 2020 (199 permits) produced an estimated gross income of \$18,648,944. Total permittees (311) produced estimated gross earnings of \$74,201,973. 17 It is likely that most of this money returned to Washington/Oregon, depending upon residency. However, if the states choose not to support gillnet fleets, much of the revenue brought in from distant water fisheries will disappear as fishers leave the area and establish domiciles in areas closer to other fisheries they may have permits for. Both states face competition from states such as Alaska, which provides fisheries loans to residents. Other states may have a better business climate. The fishermen’s exodus is now well under way.

The CFEC statistics show a decline in the number of Washington permit holders and Oregon permit holders going to Alaska from the period 2000 to 2020. For example, Washington fishers fishing Alaska salmon permits of various kinds shrank from 1410 in 2000 to 957 in 2020. Oregon fishers fishing Alaska salmon permits shrank from 420 in 2000 to 195 in 2020. California fishers fishing Alaska salmon permits in Alaska shrank from 247 in 2000 to 126 in 2020. However, the numbers of permittees participating in Alaska salmon fisheries from other states rose from 472 in 2000 to 543 in 2020. While there may be a number of reasons for that increase besides permittee relocation that information is not available. However, members of the Columbia River commercial fishing fleet are certainly aware of those who have chosen to settle elsewhere, usually Alaska or a warmer place, such as Arizona or Nevada and rely entirely on distant water fisheries. This migration from the lower Columbia will intensify the poverty issues that are already severe, as an income stream from both local and distant water fisheries will no longer accrue to the communities. Further, crew recruitment from local communities will be less likely as active fishers move away, thus reducing employment and business opportunities.

The background of these numbers is expressed in graphs in a WDFW document, *Trends in Salmon Runs Over Time*, prepared as a basis for discussions regarding license reduction in the commercial fishery, April 28, 2020. 18 The dramatic changes in catches/value after full implementation of Policy C-3620 after 2016 draw back the curtain on what was occurring in the gillnetter communities suffering from a stunning reversal of their fishery and its value in a condensed period of time. Grays Harbor County in particular shows a steep drop in fishing participation, and it is unlikely that it is a coincidence that it is the county with the third highest poverty level in the state. Further, the Washington State evaluation of Policy C-3620 states that “The large economic benefits for both commercial and recreational fisheries

expected from the Policy were not observed during the implementation period. Commercial Select Area enhancements and alternative gear development have not replaced mainstem fisheries.” It also states that “Overall, the commercial fishery saw a decrease in ex-vessel value...” 19 It must be emphasized that those decreases and lack of success accrued to one of the poorest regions in the state. There is a direct line between WDFW policies and poverty and its consequences that cannot be avoided.

Let’s talk now about community resilience, community context and systems theory. Systems theory tells us that systems have buffers, which help provide protection, support and resilience in case something in the system goes wrong. Buffers may change with circumstances. For example, up until 1952, the Bristol Bay gillnet fishery was required to fish with sailboats, as a form of “conservation by inefficiency.” Mechanization changed that custom and new buffers had to be developed. In Bristol Bay, limited entry was the tool that was used to limit the fleet size to be more efficient and effective and provide conservation. A Columbia River buffer was the introduction of hatcheries to produce fish after dam construction and major habitat change caused them to decline. Buffers are intended to help those in the system cope with change. Other examples of agency fishery buffers include season setting based on fish population demographics and matrix development to assist with harvest access by different fisheries.

Closer to home, fishermen may also develop buffers in the system. On the Columbia River, one such buffer was the development of the concept of the drift right. The flip side of co-operation was the competition that then ensued as to who was going to use the drifts, and how to ensure equity of access. The various groups developed their own rules to govern such issues as sale of a drift right, drawing lots for when each individual could lay out a net and where. Other buffers in the fishermen’s toolbox include employing family members as crew, and having spouses keep the accounts. The intent of many fishers was to pass the fishery on as an inheritance and a form of wealth. This family-based buffer fosters long-term thinking, and organizes relationships that provide for the future, with permit portfolios as buffers. Infrastructure is also a buffer. As the Columbia River fishery has declined, infrastructure such as docks, availability of ice, boat repair shops and machinery repair businesses have declined. When all the buffers are taken out of the system, resilience evaporates, which is the situation we are now in on the Columbia. All the norms are gone, including timely science to back up season setting and goal setting and permits that provide choice and mobility, and may reduce fishing pressure when runs are poor.

Here is a snapshot of what fishermen on the Columbia now face in terms of lost system buffers. These are not just confined to our communities, however, but have wide-ranging consequences for salmon themselves. Regulations change frequently. At one time season-setting was done well in advance, with room for change if runs did not arrive as predicted. Season setting now is done in a narrow time-frame. Last-minute decisions provide no possibility for fishers to plan for an upcoming year and make decisions as to which permits in their portfolio might be most appropriate. When I first started this document in September 2021, I didn’t know if gillnetters would be fishing a 6-inch mesh floater in October, or a tangle net or both. Or neither. Some fishers are invested in both gears; others have one or the other. State restrictions that reduce the ability to manage risk de-value investment in a permit. The carrot/stick approach to management is mostly stick, not much carrot. De-valuing permits may in turn hamper access to capital for investing in a business and may affect investment in local infrastructure While commercial fishing was deemed an essential occupation during the Covid pandemic, it would not have been discoverable by examining the parsimonious seasons of the C.R. gillnet fleet. The norms of long-term thinking and organic relationships among family and kin intended to provide for the future have been over-run.

Rural communities operate differently from urban communities “Unlike occupational adaptability that is achieved by education and training for a complex labor market, local knowledge and a personal reputation are keys to success.” Members of these occupational communities, such as fishing and timber communities, “can suffer more wrenching adjustments if there is change in the institutional conditions that have allowed their communities to prosper.” 20 An example of this kind of misunderstanding in management on the Columbia is a 2020 WDFW proposal to use electronic monitoring to replace human observers. This change would take information control away from the vessel owners, and violate their family traditions and norms, while also suggesting that they have illegal activities to hide. It does not foster the one-on-one relationships important in management, but intrudes on private information, one of the buffers in the system fishermen have created.

On a broader scale, changes are occurring in rural communities. Those who are losing their livelihoods in natural resource-based industries are selling the assets they have, especially land. Members of fishing families that may have existed for generations take the view that the inheritance of land from their ancestors, whether timber or farmland or shoreland, produces intergenerational stability, another buffer in the system. If fishing times were tough, one could log some timber or lease out farmland or raise beef cattle. That land is being purchased by retirees and others who want to own 2-5 acres and build a house in a rural area. The development of housing on agricultural and timber land and shorelines, and the increased need for water to serve those households is also inimical to salmon resource protection. Along the Columbia we are losing habitat and stream flows at an astonishing rate.

Subsistence activities, such as hunting, berry picking, mushroom picking, chopping wood for a wood stove for heat, that were a custom for households have also changed. Washington State now requires a \$35 permit to access public lands where these activities took place, and access is increasingly restricted. Community charitable activities once funded by donations of salmon for barbecues for fire departments, schools, churches and other community activities have been greatly reduced, due to the reduction in access to the common property resource, salmon, that swim past their doorsteps. Communities have had to switch to spaghetti or chili feeds in the land of salmon. Natural resource-based agencies have created a latent Commons, by viewing privately-owned land as a quasi-public accessory, e.g. selling licenses for hunting and fishing, or using regulatory authority, such as spotted owl circles or stream buffers for controlling habitat for wildlife on private lands. To some rural owners this is a “taking,” but they are vilified by being accused of fighting against what is best for society and they are therefore outside the moral compass. Dr. Robert Lee has written extensively on this topic regarding the maligning of loggers during the spotted owl ESA listing process, but it is an ugly fact of life for fishing families as well. 21 There is a widespread acknowledgement that much of the legislation that affects rural communities is developed without the knowledge or consent of those communities. What is the role of the managing agencies in such legislation? Issues of volatility and rate of change caused by agencies has a cost in these communities, without much reward.

In 2022 a “buyback” of C.R. commercial fishing licenses was agreed to by the state legislature. It should be noted that the 2022 buyback program was not put in place under the usual legislative procedure of bill introduction and readings, committee assignment, public hearings, consultation with those affected, etc. Nor was it a federal program under the Magnuson/Stevens Act, by which all other previous salmon license buybacks had been authorized and managed. Instead, buyback was inserted into a supplemental budget request with little opportunity for those most affected to participate. 22 Gillnetters had been meeting for nearly three years with WDFW to set parameters for a buyback program that would lead to

more viable fisheries and serve as a future conservation buffer in the event of climate change, by buying up inactive permits to reduce the fleet's potential for expansion. The purchase of active permits was also part of the package, as it was recognized that some fishers might want to exit the fishery and use the proceeds from the sale of their C.R. permit to invest in another fishing permit or some other business.

The Columbia River gillnet fishery is a "limited entry" fishery. Previous federal/state buybacks had reduced the size of the fleet, with a set number of permits allowed in order to provide viable fisheries within the capacity of the available salmon resource. ²³ Unfortunately, the increased potential for harvest was not realized by those remaining in the commercial fleet, but was largely given over to recreational fishers. Commercial fishers to this day remember it as a "bait and switch" operation, and are suspicious that the current buyback is designed to be the same. The other disturbing trend that has developed is the expansion of the recreational fishery, particularly the guide fishery, without limits, while other fisheries, such as gillnet, troll, charter and purse seine fisheries are limited entry. The conflict caused by having limited and unlimited entry fisheries on the same resource is self-evident. The clauses inserted into the Supplemental Budget do little to dispel the notion of "bait and switch" and will increase conflict. The document reads: "For all licenses purchased, the department shall calculate the reduced impacts to wild and endangered stocks based on the most recent five-year average of harvest and reserve those impacts for conservation through increased wild salmonid escapement or mark selective fisheries capable of harvesting surplus hatchery-reared salmon where needed to meet federal genetic protection requirements for wild salmon populations in a manner consistent with state-tribal fishery management agreements. The department must make recommendations to the legislature for any necessary changes in statute, regulations, or program funding levels to transition lower Columbia River mainstem gillnet fisheries to alternative, selective fishing gears, including pound nets or other gears capable of benefitting wild salmon conservation through mark-selective harvest practices." ²⁴

The language here is obviously prejudiced towards a recreational fishery. For example, the term "mark selective" ignores other means of selectivity that gillnets possess, such as time and area selection and closures, and mesh size. Impacts are not property or a legal asset in their own right, and there is no direct linkage between owning a gillnet permit and impacts. Fishermen do not own impacts. Impacts are a management tool, not a property right. However, the language joins the two together, reducing impacts allowed to the fleet as permits are purchased. It fails to address the viability of the remaining fleet, whether gillnets or some alternative gear. The language assumes that alternative gears are legal and available for use in commercial harvest that the gillnet fleet can transition to, which is currently not the case. The pound net is specified as one such gear, but it is still under study and not yet legal on the Columbia. One could draw the conclusion that the only mark-selective fishery left to benefit from additional impacts, aside from the commercial tangle net, is the recreational fishery.

There has been a movement in the past two decades to try to find "alternative gear" to the gillnet which is the legal gear. Fishermen have engaged in experimenting with a number of gears. One such gear is the fish trap, or pound net, currently being tested by the Wild Fish Conservancy. However, the potential social, community and system buffers and economic consequences of this gear have been largely ignored. First, the trap is a very expensive gear to own and operate, and under current conditions, holds little promise of profitability. The fishers have done nearly all the economic study work that is available for this gear. ²⁵ With a price tag of at least a quarter of a million dollars, and annual income to date around \$25,000, it is not an attractive proposition for any fishing business. The most

likely owners would probably be fish processing companies and others who could vertically integrate such gear into their hiring practices, and create a monopoly on harvest that would control fish prices, both to other fishers and to the public. This is exactly what happened in the past.

Traps operated on a 19th century business model created during the Industrial Revolution, whereby vertical integration gained the owner price control. Washington, British Columbia and Alaska all eliminated traps, in large part as a repudiation of this business model. When Alaska became a state, fish traps were banned in its constitution. In Washington and Oregon, they were banned by popular vote. Current academic questions regarding revival of traps on the Columbia revolve around issues such as mortality rates. However, fishing community questions revolve around: “Do traps raise the standard of living, or devalue fish prices from other types of fisheries, e.g. gillnet, reef net, troll, along the entire coast?” “Can a reasonable profit be made?” “What are the long-term prospects for this gear?” “What are the risks?” “What are the potential ecological problems, such as silting in of areas near fish traps, that occurred in the 19th century?” The element of coercion is also a factor, in that state agencies have tried to encourage the use of traps while cutting gillnet seasons, a system fostered by Washington Policy C-3620 and in Oregon by S.B. 830. These policies/laws have narrowed the range of alternatives available to fishermen, and have greatly restricted use of other selective means such as tangle nets. The buffers have been taken out of the system in terms of lost opportunity, with no alternative except an antiquated and unaffordable 19th century Industrial Revolution business model.

To some degree the fish trap also reflects an antiquated social reconstruction, that of the patron/client relationship. While it is not yet clear how fishermen are to be involved in implementing fish traps, there are suggestions such as grant-writing to obtain funding to lease a site and purchase the gear, with the non-profit Wild Fish Conservancy and WDFW involved in this activity. Fishermen have repeatedly asked how this kind of financial arrangement would work, who would actually own the traps, and who would be managing them, and what the tax and regulation implications are, but have yet to receive responses. This kind of business model, a quasi-patron/client relationship, was in vogue in the 19th and 20th centuries, when the fisher fished for a packer, who in turn provided funding for boat purchases, loans, and, in early days, the gear and boats themselves. Fishermen were not so much independent operators but “clients” of the companies in a paternalistic relationship. In extreme cases, fishermen might be indentured labor, brought over from Europe by a company such as Joe Megler’s Brookfield Canning Co., which then expected them to fish for the company in order to pay their passage and other bills, such as boat and net leasing. The company controlled the price paid to the fisher, who was obliged to accept it in order to pay debts. The institution of the “company store” survived well into the 20th century in a number of Columbia River fishing communities.

Mechanization in the early 20th century started a change in the patron/client relationship system, in that fishermen saw advantages in mechanization and owning their own boats, and also formed a number of co-operative packing companies, the best-known being Union Fishermen’s Co-operative Packing Co., to gain some control over pricing. Today’s fleet is more diverse, largely composed of independent businesses, some of whom market their own fish or work in co-operative ventures. The fishing business model has evolved substantially with the development of permit portfolios that allow more flexible partnerships and the possibility of value-adding to the product and gaining higher prices, as well as controlling business decision-making. However, fishermen are well aware of the issue of corporate control. A recent survey put out by the North American Marine Alliance lists as one of its chief concerns that “Various fisheries management approaches, including Catch Share policies, are

enabling fewer and bigger businesses to access US fisheries to the exclusion of owner-operator, younger generation, and independent fishermen. This consolidation leads to loss of income and infrastructure in rural communities, adverse ecological impacts, and food insecurity.” 26 Recent literature indicates that NGOs are becoming more involved in fish quota purchases and management, with mixed reviews from fishers and affected communities. 27

The numbers cited indicate that state agencies are working at cross purposes, reducing the economic viability of the C.R. gillnet fishery and its communities, and expecting that salmon recovery, for which these communities do considerable advocacy, will occur. Salmon recovery will occur only in the context of the communities that support it and are willing to work on habitat issues. In order to revive these fishing communities, state policies must consider urban and rural communities and their differing roles and needs. Restrictions on land, timber and fisheries in rural coastal counties in the name of “salmon recovery” have, ironically, left these counties out of any economic feedback benefits from recovery except for tourism and recreation, and unwittingly validated the urban view that recreation/tourism is the only morally acceptable use of natural resources. Tourism/recreation are seasonal, do not provide the kind of economic return some of the natural resource-based industries do, and are limited by weather, events like the Covid 19 epidemic, and law enforcement capacity. And, as the law of unintended consequences arises once again, the salmon habitat much of this land provided is now being sold for development to many of those same tourists and visitors. This re-allocation of benefits from a natural-resource-based region to a more urban audience is changing community dynamics. It also flies in the face of the “equity of access” value that sustained the commercial fishery since the early 1870s. Salmon are a “food fish” by statute. 90% of the population does not fish recreationally, and of those who do, 25-30% fish for salmon. Everyone else turns to commercial fisheries as their source of supply. The inequity of access in current allocations affects the general public as well as fishermen. Further, commercial fishing communities, advocates for salmon recovery, have been allocated out of the recovery issue. And finally, the habitat necessary for salmon recovery is being lost due to the desire for rural homes by urban dwellers, a trend exacerbated by Covid 19 that made it feasible to work from home, wherever home was located.

The issue of environmental justice and environmental burdens arises in the current Columbia fisheries crisis. Quoting from *B-Engrossed Oregon House Bill 4077*, signed into law by the Gov. Kate Brown in 2022, Sec. 11 (3): “ ‘Environmental justice’ means the equal protection from environmental and health risks, fair treatment and meaningful involvement in decision making of all people, regardless of race, color, national origin, immigration status, income or other identities with respect to the development, implementation and enforcement of environmental laws, regulations and policies that affect the environment in which people live, work, learn and practice spirituality and culture.” An environmental justice community (House Bill 4077, Sec. 10 (4)) “includes communities of color, communities experiencing lower incomes, communities experiencing health inequities, tribal communities, rural communities, remote communities, coastal communities, communities with limited infrastructure and other communities traditionally underrepresented in public processes and adversely harmed by environmental and health hazards...” “Fair treatment,” as stated in H.B. 4077, Sec. 10 (6), means that no one group of people, including racial, ethnic or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal environmental programs and policies.” While the citations are from the Oregon statute, in Washington a similar bill was passed in 2021 and is

now Chapter 70A.02, *Revised Code of Washington*. Both statutes could be applied to the occupational communities of Columbia River gillnetters in both Oregon and Washington, in that the treatment these communities have and are receiving in terms of re-allocation of the salmon resource, lost fishing time, lost incomes, and de-valuation of their permits and property, do not fit the definition of environmental justice. Rather, they demonstrate that these communities are bearing a disproportionate environmental burden created by agency policies to transfer access of the salmon resource to the recreational fishery. The trend of increasing negative social statistics over a considerable time period, combined with continued reduction of the fleet, including the recent State of Washington program to buy back permits and eventually replace gillnetting entirely, could easily be characterized as a disproportionate amount of the environmental burden.

Let us turn now to salmon recovery, an issue of vital concern not only to fishers but to the entire Northwest. Steve Fick, owner of FishHawk Fisheries in Astoria, Oregon, describes how the presence of salmon has affected community life in the lower Columbia:

“For my area, salmon create opportunities and life choices. Working in a salmon plant, serving fish in a restaurant, fishing on a boat or at a related marine business creates family-wage jobs. Philanthropic opportunities in rural Oregon are created through our sustainable natural resource-based industries, such as fisheries, timber and agriculture. In Astoria, salmon mean scholarships for students, little league sponsors, food bank support and libraries, just to name a few of the benefits these fish provide. Seasonal jobs created meaningful dollars for our youth to invest in their futures, including college and trade schools. Doctors, teachers, tradespeople, architects and biologists all have touched my life, by working or fishing for my salmon company.

Our social fabric is tied to salmon. Local community festivals, the annual Astoria Regatta, suicide levels, and mental health problems are all directly associated with the health of our salmon. If we are to sustain and recover salmon, a connection must continue to exist with those affected by their existence and expand to the rest of society. We all need to understand the indirect connection healthy ecosystems bring to us all.” 28

The following proposals are suggestions as to how to deal with recovery in the context of the communities who are adjacent to salmon habitat, as well as those who depend upon them for economic, social, subsistence and spiritual reasons.

Recommendations

1. Habitat protection and restoration is key to having viable fisheries in the future, whether commercial, recreational or tribal. Pay landowners for conservation set-asides of property and conservation easements. Reimburse fishers’ costs in developing new gear; pay just compensation for permit buybacks that will ensure a viable commercial fishery in the future. Fishermen and others should be adequately compensated for confiscation or re-direction of their property. Using a carrot, rather than a stick will accomplish more in a shorter time frame.

2. Promote resilience. Recognize that diversification sustains the economic viability of these communities. Tourism/Recreation, used as a substitute for natural resource-based industries, has become a form of “mono-cropping,” forcing communities to rely on one economic source that may not support families or communities, and is subject to fluctuation due to issues such as a recession or

pandemic. State and federal commitments to recovery goals and viable fisheries need the support of local communities, especially those located near the habitat that fish need.

3. Address the issue of cost-cutting. Agencies moved out of rural areas and consolidated in urban areas as a cost-cutting measure in years past, which increased the cost of access to services to those rural communities as they now have to travel long distances. This management decision has also reduced first-hand observation and knowledge of those communities and their habitats by the managing agencies. A new generation of employees entering management may have little connection to the people and natural resources they are managing. Fisheries management is becoming increasingly abstract as a result, but needs to be more on-the-ground and locally focused, particularly on habitat.

4. Recognize that with global warming, some previously used conservation measures, such as mark-selective catch-and-release fisheries, may not work as stream and tributary water temperatures rise and contribute to increased mortalities on released fish. Conservation easements and activities such as tree-planting along stream banks to help cool the water may help mitigate some of these problems, but will take a long period of growth-time before they reach full potential. Habitat protection and restoration is key to having viable fisheries of any kind in the future

5. Finally, recognize that when all the buffers are taken out of the system chaos ensues. Just as chaos theory suggests that the “beating of a butterfly’s wings in Texas may create a hurricane in California,” small changes in fisheries management in Olympia or Salem may lead to very large, and largely unforeseen, changes in fishing cultures and communities and on the fish themselves and their habitat. Increased communication by management agencies with those whom they are managing, along with meaningful policies that take into account the values and experience of those whose fisheries are affected, would be a major step in creating more viable fisheries.

Long-term thinking; Advocacy; Community efforts; Willingness to work together; Equity of access.

These are values that help salmon and salmon recovery. Removing the buffers out of the systems that salmon fishers and advocates rely on destroys community resilience, leading to desperate people selling their land/salmon habitat for development. Salmon will not survive, let alone thrive, if these values are ignored.

Notes

1. Information from the Pacific Fishery Management Council, www.pcouncil.org/fishing-communities. Accessed Ap. 19, 2022.
2. Martin, Irene. “Clifton Gillnetters: Their Ethnic and Occupational Identity, p. 95.
3. U.N. Food and Agricultural Organization Committee on Fisheries, Addressing Climate Change and Other Environment Related Matters. 34th Session, Feb. 1-5, 2021.
4. Martin, Irene, “Clifton Gillnetters...” Op cit.”, p. 98.
5. Martin, Irene. A Social Snapshot of the Columbia River Gillnet Fishery. Astoria, OR, Salmon For All, 2005.
6. Wasberg, Jill , The Decline of the Salmon Fishing Industry: The Willapa Bay and the Columbia River Estuary, pp. 47-49.
7. Information from website of the Coastal Community Action program, accessed June 10, 2014; United Way of Grays Harbor and Cowlitz Family Health, www.unitedwaygraysharbor.org accessed

- June 14, 2021; www.cowlitzfamilyhealth.org for information regarding food banks in Cowlitz, Wahkiakum and Pacific Counties.
8. See www.indexmundi.com for statistics on poverty levels by county; www.deptofnumbers.com for statistics re household income in Washington State; 2020 U.S. Census for population characteristics by county.
 9. Bureau of Labor Statistics. News Release, National Census of Fatal Occupational Injuries in 2019, Dec. 16, 2020, p. 3.
 10. Washington Office of Financial Management. Variations in Life Expectancy and Mortality Rates by State Legislative Districts, 2012-2014, pp. 3-4.
 11. Washington Dept. of Fish and Wildlife. Data Overview, Trends in Salmon Runs Over Time; Demographics of the Fleet, License Trends and how they inform development of a license reduction program, Ap. 28, 2020, pp. 9-10. Power Point.
 12. Tweit, Bill, Ryan Lothrop and Cindy LeFleur. Comprehensive Evaluation of the Columbia River Basin Salmon Management Policy C-3620, 2013-2017. Olympia, Washington Dept. of Fish and Wildlife, Nov. 2018. FPA 18-11, p. viii.
 13. Watson, Brett, et al. pp. 3, 4.
 14. Martin, Irene. A Social Snapshot, op. cit., p. 10.
 15. A fully documented description of this annual migration is contained in Roger Tetlow and Irene Martin, Flight of the Bumble Bee, The Columbia River Packers Association and a Century in the Pursuit of Fish, Chapter Three, "North to Alaska," pp. 27-41.
 16. Mantua, Nathan, et al. "A Pacific Interdecadal Climate Oscillation with Impacts on Salmon Production."
 17. Commercial Fisheries Entry Commission. CFEC Fishery Statistics – Participation and Earnings. www.cfec.state.ak.us.
 18. Washington Dept. of Fish and Wildlife. License Reduction Work Group Meeting #1 Data Overview. April 28, 2020. Graphs 5-16.
 19. Tweit, Bill, Ryan Lothrop, and Cindy LeFleur, Comprehensive Evaluation of the Columbia River Basin Salmon Management Policy C-3620, 2013-2017, p. viii.
 20. Lee, Robert & Donald Field, Diversity and Change in Forest-based Communities", in Communities and Forests: Where People meet the Land, p. 114.
 21. Lee, Robert. Broken Trust, Broken Land: Freeing Ourselves from the War over the Environment. Wilsonville OR, BookPartners, 1994.
 22. Engrossed Substitute Senate Bill No. 5693, An Act Relating to Fiscal Matters. Washington State Legislature, 2022.
 23. For a complete history of Washington salmon permit buyback, See Ben Muse, Washington State Commercial Salmon Fishery Buyback Programs, 1995-1998.
 24. Engrossed Substitute Senate Bill No. 5693, An Act Relating to Fiscal Matters. Washington State Legislature, 2022.
 25. Salmon For All, Analysis of Economic Viability Issues re a Columbia River Fish Trap/Pound Net fishery, Feb. 2021, p. 1. The Executive Summary states: Topics include Capital and Non-Capital Costs, permitting requirements, and economic issues both for the individual fisher and Washington Dept. of Fish and Wildlife (WDFW). The evidence indicates that, given the cost and returns of a pound net operation, it is not viable economically. Comparables from other fisheries indicate that financial returns from fisheries with similar investment costs are considerably higher than can be realized from a pound net fishery in the foreseeable future.

26. North American Marine Alliance, www.namanet.org. Website accessed Aug. 10, 2021.
27. For example, See Hall, Stephen, et al., "Catch Shares versus Sharing Catch." www.sustainablefisheries-uw.org. Website accessed May 10, 2022.
28. Marine Fisheries Advisory Committee (MAFAC). A Vision for Salmon and Steelhead: Goals to Restore Thriving Salmon and Steelhead to the Columbia River Basin, p. 107.

Bibliography

Bureau of Labor Statistics. News Release, National Census of Fatal Occupational Injuries in 2019. Dec. 16, 2020.

Centre for Community Enterprise. The Community Resilience Manual, A Resource for Rural Recovery and Renewal. Port Alberni, B.C., CCE Publications, 2000.

Commercial Fisheries Entry Commission. CFEC Statistics – Participation and Earnings. www.cfec.state.ak.us.

Hall, Stephen, Neil Andrews, and David Mills. "Catch Shares versus Sharing Catch." Sustainable Fisheries, Nov. 24, 2015. www.sustainablefisheries-uw.org. Accessed May 10, 2022.

McGoodwin, J.R. Understanding the Cultures of Fishing Communities: A Key for Fisheries Management and Food Security. Rome, Italy, FAO Fisheries Technical Papers, 2001. No. T401.

Lee, Robert. Broken Trust, Broken Land: Freeing Ourselves from the War over the Environment. Wilsonville, OR, BookPartners, 1994.

Lee, Robert and Donald Field. "Diversity and Change in Forest-based Communities" In Communities and Forests: Where People meet the Land, Ed. By Robert Lee and Donald Field. Corvallis, OR, Oregon State University Press, 2005, pp. 113-115.

Mantua, Nathan, Steven Hare, Yuan Zhang, John Wallace and Robert Francis. "A Pacific Interdecadal Climate Oscillation with Impacts on Salmon Production." Bulletin of the American Meteorological Society, vol. 78, No. 6, June 1997, pp. 1069-1079.

Marine Fisheries Advisory Committee (MAFAC). A Vision for Salmon and Steelhead: Goals to Restore Thriving Salmon and Steelhead to the Columbia River Basin. Phase 2 Report of the Columbia Basin Partnership Task Force, Oct. 2020.

Martin, Irene. Legacy and Testament, the Story of Columbia River Gillnetters. Pullman, WA, Washington State University Press, 1994.

Martin, Irene. A Social Snapshot of the Columbia River Gillnet Fishery. Astoria, OR, Salmon For All, 2005.

Martin, Irene. "Clifton Gillnetters: Their Ethnic and Occupational Identity." In To Harvest, To Hunt, Ed. By Judith Li, Corvallis, OR, Oregon State University Press, 2007, pp. 92-101.

Martin, Irene. Columbia River Selective Gear Literature Review. Vancouver, WA, Washington Dept. of Fish and Wildlife, Region 5, 2008.

Martin, Irene. "Commercial Fisheries Historical Influence on Columbia River Salmon Recovery." The Fishermen's News, Oct. 2019, pp. 8-12. Based on a presentation by the author at the Salmon Recovery Conference, May 27, 2015, Vancouver, WA.

Martin, Irene. "Fishing and the Rural/Urban Divide." The Fishermen's News, May 2020, pp. 28-30.

Martin, Irene and Roger Tetlow. Flight of the Bumble Bee, The Columbia River Packers Association and a Century in the Pursuit of Fish. Chinook, WA, The Chinook Observer, 2011.

Muse, Ben. Washington State Commercial Salmon Fishery Buyback Programs, 1995-1998. Washington State Commercial Salmon Fishery Buyback Programs, 1995-1998. Alaska Commercial Fisheries Entry Commission, Juneau, AK, March 10, 1999 CFEC 99-1N.

Salmon For all. Analysis of Economic Viability Issues re a Columbia River Fish Trap/Pound Net Fishery. Astoria, OR, Salmon For All, Feb. 2021.

Tweit, Bill, Ryan Lothrop, and Cindy LeFleur. Comprehensive Evaluation of the Columbia River Basin Salmon Management Policy C-3620, 2013-2017. Olympia, WA, Washington Dept. of Fish and Wildlife, Nov. 2018. FPA 18-11.

U.N. Food and Agriculture Organization Committee on Fisheries. Addressing Climate Change and Other Environment Related Matters. Thirty -Fourth Session, Feb. 1-5, 2021. www.fao.org, consulted July 26, 2021.

Wasberg, Jill. The Decline of the Salmon Fishing Industry: The Willapa Bay and the Columbia River Estuary. M.A. Thesis, Olympia, WA, The Evergreen State College, June 2002.

Washington Dept. of Fish and Wildlife. Data Overview: Trends in Salmon Runs over Time. Prepared for the License Reduction Work Group Meeting #1, April 28, 2020. Power Point presentation.

Washington Office of Financial Management, Variations in Life Expectancy and Mortality Rates by State Legislative Districts, 2012-2014. Olympia, WA, Health Care Research Center, Office of Financial Management, Feb. 2016. www.ofm.wa.gov

Watson, Brett, Matthew Reimer, Mouhcine Guettabi, Alan Haynie. Commercial Fisheries and Local Economies. Journal of Environmental Economics and Management, Jan. 2021. Entire Journal.

Websites consulted

www.cowlitzfamilyhealth.org, for information regarding food banks in Cowlitz, Wahkiakum and Pacific counties.

www.unitedwaygraysharbor.org for information for Grays Harbor County food banks.

www.indexmundi.com for statistics on poverty levels by county.

www.deptofnumbers.com for statistics re household income in Washington State.

U.S. Census for population characteristics by county.

North American Marine Alliance, www.namanet.org.