

# RESTORATION

A NEWSLETTER ABOUT SALMON, COASTAL WATERSHEDS, AND PEOPLE

Oregon Sea Grant • Spring 1997 • FREE

## Survey of 500 How the Coast Public Views Salmon Restoration

By Joseph Cone

Oregon coast residents have some strong opinions about the decline of coastal salmon and proposed methods to restore the fish, and their views suggest that fishery managers and the state's restoration planners have some work ahead to bring the public on board salmon recovery efforts.

These are some of the key insights from a new survey of 500 Oregon coast residents conducted by researchers Court Smith and Jennifer Gilden at Oregon State University (OSU). The survey is the largest systematic sampling of coastal public opinion about salmon undertaken in recent years. It was funded by Oregon Sea Grant, a marine research and education program at OSU.

"Coastal residents as a whole have not had very much say in the formulation of the state's Coastal Salmon Restoration Initiative," said Smith, an OSU professor of anthropology and the survey leader. "Their views are divided and are often not in synch with values reflected in the governor's restoration plan."

The Sea Grant study, conducted in November and December, surveyed a random sample of all

Oregon coast residents and a smaller group of identified "salmon opinion leaders"—coastal watershed council and elected officials. Surveys were mailed to more than 800 coastal residents and 195 leaders.

Key findings, according to Smith and Gilden, are

- The state, rather than the federal government, is favored to lead salmon restoration.
- The public and fishery managers have widely different views on a number of issues, including the effect of predators such as seals and sea lions on salmon; the role of hatcheries; and the importance of wild fish.
- There is strong support for compensating private landowners for protecting and restoring salmon.
- Nearly half of respondents (47 percent) are willing to volunteer a half day or more a month on salmon restoration work.
- The public has no greater than moderate confidence in institutions and organizations dealing with salmon—a confidence level of 3 on a scale of 1 to 5. In general, federal fish and wildlife agencies and the OSU Extension Service fared better than environmental groups and city and county planners, which were rated higher than federal courts or Congress.

- The coastal public receives its salmon information mainly from television and radio (62 percent) and by word of mouth (60 percent).

### Public and Professionals Not in Synch

The distance between public and professional opinion was clear in response to a question which asked the relative importance of certain factors for the future of salmon. While most professionals would argue that reducing predators like seals and sea lions, increasing hatchery production, and eliminating ocean driftnets fall

decidedly on the less important end of the scale, the public thinks that reducing marine mammals and stopping ocean driftnetting are very important, said Smith.

Opinions are also opposite regarding hatcheries. While nearly all salmon biologists argue now that hatchery production should be decreased and changed to avoid harming wild fish runs, only 20 percent of respondents agree. Nearly half—38 percent—of the rest of the respondents think it's "not important at all" to decrease hatchery production.

"The public apparently views the salmon decline mainly as a production problem," said Smith. "They see hatcheries as at least part of the solution."

### VALUES SHAPE SALMON OPINIONS

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# How the Public Views Salmon Restoration

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In reviewing the 500 responses, Smith and Gilden wanted to see if there was any factor that would help leaders of salmon restoration understand what would motivate coastal people to restore the salmon. They examined variables like age, income, and education but found that the most critical factors in shaping people's opinions about salmon were their values and beliefs.

A key question noted that trade-offs between the environment and the economy could be involved in salmon restoration and asked respondents to place themselves on a scale from favoring the environment to favoring economic considerations. Forty percent of respondents said their priority was "restoring and protecting environmental conditions even if there are negative economic consequences," while 16 percent favored the economy over the environment. Most people, 44 percent, favored an "equal priority."

Those preferences repeatedly shaped other opinions. For example, the majority of those who favored the environment think that endangered species laws don't need changing, while those who favor the economy think that they do. Those on the environmental side are much more willing to volunteer time to help restore salmon than are those who favor the economy.

## Implications for Public Outreach

Such responses have importance for those who are trying to promote salmon recovery efforts, said Gilden.

"Coastal residents will interpret and evaluate plans and information according to their beliefs," said Gilden. "To the extent that a plan captures the values of coastal residents, acceptance is more likely."

Smith advises salmon recovery planners to think of their task as not "selling the governor's plan," but "addressing resident concerns."

Educating and working with the public to increase their understanding of the issues—a much longer process than merely mounting a

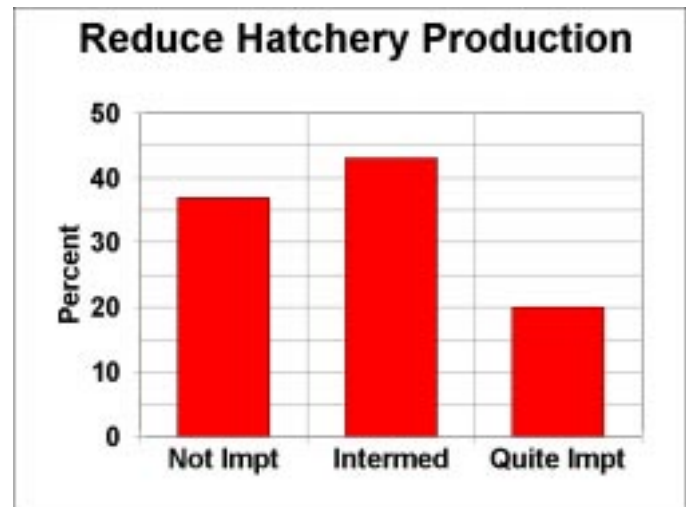
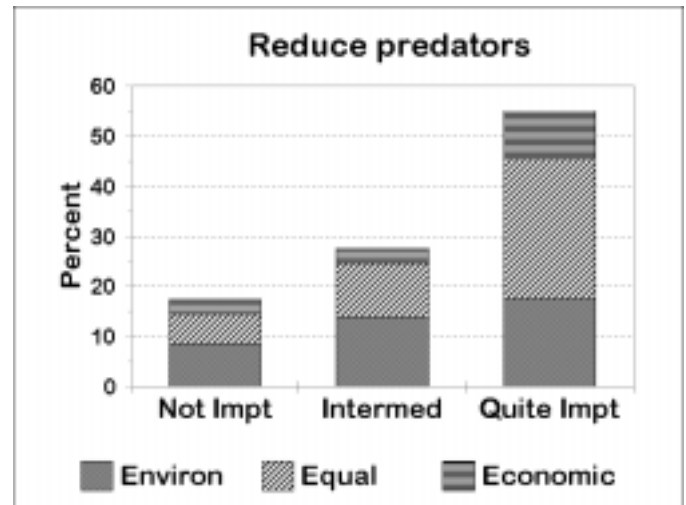
public relations or information campaign—is likely to be needed in some cases, said Smith.

Despite the considerable attention on salmon decline in the news media and within government, many coastal residents are not engaged by the issue. This interpretation comes from phone calls to about two-thirds of those who did not respond by mail.

In talking personally with 150 people, Smith identified five groups among those who did not respond: those for whom salmon restoration is simply not a priority concern; people who feel they are not knowledgeable enough to respond to a survey; a "small but vocal" group who oppose or are hostile to "government" and equated the survey with government; and a generally older group who felt that their opinions were not as important as those of a younger generation and that they should defer to them.

Finally, some nonrespondents were probably seasonal residents of the coast and simply not at home.

Smith and Gilden, who have completed comparably large opinion surveys of salmon trollers and gillnetters in the last 18 months, noted that all surveys have limitations based on who responds. As a group, the 500 respondents to the Sea Grant survey were older and had a higher average income than the coastal average. Also, the respondents were disproportionately men.



These two graphs show that coastal respondents have views about marine mammals and hatchery production that are at odds with professional views. The predator respondents are further characterized by the priority respondents placed on the environment, the economy, or an equal balancing of the two.

## For More Information

An analysis of survey results will be published by Oregon Sea Grant this spring, although an exact date is not known at *Restoration* press time. To request a copy of the analysis, refer to the Smith and Gilden coastal public opinion survey, and address queries to Sea Grant Communications: seagrant@ccmail.orst.edu or call 541/737-2716.

Graphs courtesy C. Smith and J. Gilden

# An Independent Critique Scientists Question Oregon's Plan

*Editor's Note:* On March 17, the Executive Committee of the Oregon Chapter of the American Fisheries Society sent comments about the Oregon Coastal Salmon Restoration Initiative (CSRI) to Will Stelle, Regional Director of the National Marine Fisheries Service.

The Oregon AFS is a volunteer organization of professionals in fisheries and aquatic sciences, with over 500 members in Oregon, representing a diverse mix of scientists in federal, state, and tribal agencies, and in the private sector. Regardless of whether coho receive federal listing, the observations of these aquatic scientists will continue to be of relevance.

The committee "acknowledged the vision of Governor Kitzhaber for initiating recovery efforts for Oregon's salmon. "As scientists," they continued, "we recognize this can be achieved only by restoring salmonid ecosystems to a healthier condition. Given the scale of the problems facing coastal coho salmon and other aquatic species, and the short timelines for developing a comprehensive recovery plan, we believe those involved in the CSRI have done their best and we appreciate their efforts."

Nevertheless, the Executive Committee said that their "preliminary review indicates that a great deal of uncertainty remains in the following areas: the fundamental approach of the plan, the model that suggests Oregon's coho are highly resilient, the assessment of risks, and the efficacy of conservation measures."

The following is the substance of the AFS letter, as signed on behalf of the Executive Committee by President Thomas W. H. Backman. References to supporting scientific literature have been deleted.

**T**he Endangered Species Act mandates that NMFS make its listing decision based on the best scientific data available. To assist NMFS, we offer the following key areas of concern identified during our preliminary review of the revised CSRI plan. We believe NMFS has the responsibility to resolve or account for the uncertainty in these areas as a part of its risk assessment in determining whether or not to list Oregon's coho salmon under the ESA.

## Conceptual Foundation

The CSRI does not appear to be based on a coherent conceptual foundation, which must guide the recovery approach and must be the organizing principle around which the entire plan is structured. The conceptual foundation described in the revised CSRI was added after most of the plan was completed and may be inconsistent with at least some sections of the document.

## Habitat-Based Model

The model, which is the basis for claiming Oregon coast coho salmon are resilient, does not seem to account for the negative effects that declining habitat productivity should have on egg-to-parr survival, particularly at very low levels of abundance. Future ocean productivity is modeled on past cycles, which may be too optimistic given human effects on the ocean environment. The model (and the CSRI as a whole) does not acknowledge or analyze the potential that ecological changes in the ocean which are adverse to salmon may not be easily reversible. In addition, spawner escapements given in the CSRI suggest that not all year classes are replacing themselves in many basins along the northern Oregon coast, even at levels of abundance far below habitat capacities estimated by the model, and despite drastic reductions in harvest mortality.

## Five AFS Questions: The Governor's Plan, Long-Term

- How will proposed conservation measures be adequately implemented?
- What evidence is given that there is sufficient long-term commitment to achieve restoration of coastal aquatic ecosystems?
- How does the CSRI assess the sufficiency of proposed conservation measures to achieve habitat recovery?
- How does the CSRI address the root causes of habitat degradation and alter institutional, social, and economic behaviors?
- What are the specific mechanisms to insure change?

## Core Area Mapping

Core areas are identified in isolation from their watersheds, counter to prevailing scientific literature on conservation strategies. The areas were selected on the basis of observed fish numbers or current habitat quality, without considering the importance of historic habitat (low gradient or estuarine sections) or diversity of populations. The CSRI does not assess the adequacy (functionally, numerically, or spatially) of the group of selected core areas as a conservation strategy.

## Conservation Measures

Questions remain about funding, fundamental changes in institutions, reliance on voluntary compliance, and the effectiveness of proposed conservation measures to restore aquatic ecosystems. In addition, there is considerable risk in relying on existing forest practice regulations when scientific informa-

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# A Human-Influenced Disturbance Regime, Part 2 When Disturbance is Good

By G. H. Reeves, L. E. Benda, K. M. Burnett, P. A. Bisson, and J. R. Sedell

*Editor's Note:* The following is the second of two parts from an important professional article written by a group of prominent watershed scientists working in the Northwest. The larger article, excerpted in this and the previous issue of *Restoration*, gets down to details as "A Disturbance-Based Ecosystem Approach to Maintaining and Restoring Freshwater Habitats of Evolutionarily Significant Units of Anadromous Salmonids in the Pacific Northwest." It was originally published in 1995 by the American Fisheries Society and is reprinted here with permission. The excerpts, edited slightly for *Restoration*, describe the critical—but often misunderstood—role of disturbance (both natural and human caused) as a vital force in watershed ecosystems.

The new disturbance regime created by timber harvest should address the concerns listed [in the first part of this discussion—namely, "the differences between present timber harvest disturbance regime and the natural disturbance regime"].

The legacy of hillslope failures associated with timber management activities needs [a response which includes] more large wood. Benda (1990) identified the attributes of first and second-order streams that favor the delivery of desirable material to fish-bearing channels. Increasing the extent of riparian protection along these streams, as proposed by Thomas et al. (1993), obviously increases the potential delivery of wood.

Such a strategy may not result in wood loadings as large as occurred naturally [since] trees away

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from the riparian zone will have been removed. However, this strategy should increase wood loadings beyond what is currently possible and should allow channels to develop more complex habitats.

Longer intervals between harvest rotations could be another component of this new disturbance regime. In single basins in the central Oregon Coast Range, the desirable interval may be 150-200 years, although this is a first approximation. The exact interval would depend on the magnitude and areal extent of the natural disturbance regime and the time it takes for favorable habitat conditions to develop if adequate large wood and sediment are available. It will be different in other regions.

Extending rotation time would also provide benefits to many terrestrial organisms.

Concentrating rather than dispersing management activities could be another element of the new

disturbance regime. This would more closely resemble the pattern generated by natural disturbances than does the current practice of dispersing activity in small areas. For example, if a basin has four subwatersheds, it may be better to concentrate activities in one for an extended period (50-75 years) than

to operate in 25% of each one at any time. This approach could also be linked to planning future reserves and reducing risks in reserves, so it merits consideration in the development of habitat recovery efforts.

All of the elements discussed above must be

included in the development of a new disturbance regime if the regime is to be successful at creating and maintaining habitats for anadromous salmonids. Exclusion of any element greatly reduces the potential for success. Our concept of designing a disturbance regime around human activities could complement parts of other strategies proposed for management of the central Oregon Coast Range (Noss 1993) and other parts of the Pacific Northwest (PNW) (e.g., Thomas et al. 1993). These call for reserves in which human activity is curtailed or eliminated.

The proposed new disturbance regime could be applied to areas outside any such reserve system, particularly in the short term. It could also guide management strategies in reserves where limited human activity is allowed. The long-term goal of this effort would be to create refugia to replace and complement refugia in permanently designated reserves, such as wilderness areas and other withdrawn lands.

## Conclusions

Plans directed at the freshwater habitat for Evolutionarily Significant Units (ESUs) of anadromous salmonids in the Pacific Northwest must be focused on restoring and

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## Five Key Ideas

- Disturbance is natural.
- Timber management could help create a human-influenced disturbance regime that maintains components of the natural regime.
- The natural disturbance regime in the Oregon Coast Range was dominated by wildfires, which are not common today.
- In smaller watersheds, after a wildfire the most diverse physical and biological stream conditions may have taken 150 years to develop.
- Stream habitat is less complex under a timber harvest regime than under a natural regime, and the potential for achieving greater complexity is also reduced.

—jc

## When Disturbance is Good

*Continued*

maintaining ecosystem processes that create and maintain habitats through time. It is important to insure that as good habitats “wink out,” either through anthropogenic or natural disturbances or through development into new ecological states, others “wink on.” Designating the most intact remaining aquatic ecosystems as reserves is essential for meeting near-term requirements. In the long term, a static reserve system alone is unlikely to meet the requirements of these fish. Management must also be directed at developing the next generation of reserves.

Strategies should be designed and implemented that treat land management activities as disturbance events to be manipulated so as to retain the ecological processes necessary to create and maintain freshwater habitat through time. Although necessary for anadromous salmonids, the approach of moving reserves and managing periodic disturbances may not be suitable for locally endemic or immobile biota. It is imperative to consider the needs of other organisms in the development of any habitat recovery program for ESUs of anadromous salmonids.

Many hurdles must be overcome to make our approach effective. First, biologists, managers, and planners need to think in longer time frames than they are generally accustomed to using. They need to acknowledge that ecosystems are dynamic in space and time over these longer periods. Simply designating reserves and expecting these

to function as such for extended periods may be unrealistic; some benefits may accrue in the short term, but in the long run it is unlikely that habitats of sufficient quality and quantity will be available to sustain ESUs of anadromous salmonids.

Expectations about habitat conditions in streams must change; a stream will not always have suitable habitats for anadromous salmonids, and all streams should not be expected to have suitable habitats at the same time. A consequence of a dynamic view is that perspectives must be regional. The percentage of the landscape that should contain suitable habitats must be identified and the temporal and spatial distributions of these habitats determined.

Finally, disturbance must be recognized as an integral component of any long-term strategy. This will be a difficult hurdle to overcome. It requires educating resource managers, scientists, administrators, politicians, and the public so they realize that periodic disturbance is not necessarily negative. To the contrary, disturbance may be necessary in order to have productive habitats for ESUs of anadromous salmonids in the PNW over long periods.

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## Scientists Question Oregon's Plan

*Continued from page 3*

tion suggests that: 1) they are inadequate for recovery of aquatic ecosystems, and 2) they have been judged insufficient for Habitat Conservation Plans on private timber lands. We are also concerned that the CSRI contains no new regulations or substantial changes in agricultural practices which have degraded historically important habitats. Restoration of these low gradient and estuarine stream sections will likely be crucial for coho salmon recovery.

When we consider the centuries needed to recover from past habitat degradation, the degree of social and economic change needed to change the patterns of behavior that led to current conditions, and the changes in political landscapes that will occur, we are not encouraged that the CSRI provides the necessary guidance or strength for recovering coho salmon. We believe a strong federal presence is necessary to provide continued independent oversight and incentives for implementing an effective recovery strategy.

“This [CSRI] is essentially a large social experiment that will require shifts in our values, cultures, behaviors, and institutions in order to achieve true sustainability of our fisheries resources.”

—Tom Backman, AFS Chapter President, in a March 21 press release issued by the Oregon AFS.

USDA Forest Service photo



*The long-term goal is to create refuges to replace and complement existing refuges.*

## Educators Assess Needs

By Pat Corcoran

As the pieces of a comprehensive salmon and watershed restoration plan for Oregon become clearer, one element stands out. Education and outreach are critical to the success of such efforts, given the voluntary, rather than regulatory, approach favored by the state.

In February and March, Oregon State University convened two meetings to help a diverse group of participants make progress on education and outreach activities. A workshop held February 11–12 at OSU identified pressing issues and needs of both information providers and the audiences they seek to serve. Two hundred participants attended, including K–12 teachers, watershed council staff and members, Soil and Water Conservation District staff, OSU research and Extension Service faculty, federal and state agency personnel, and members of nongovernmental organizations (NGOs).

The main purpose of the workshop was to further develop the outreach and education component of the Governor's Coastal Salmon Restoration Initiative (CSRI). Participants generated hundreds of ideas. They also learned more about each other from a printed list of educational partners and programs that relate to salmon, watersheds and habitat restoration. In addition, an evening poster session provided an opportunity for groups to share information and demonstrate innovative projects. The workshop concluded with encouragement from Governor John Kitzhaber and OSU President Paul Risser.

The February workshop didn't attempt to establish an overall communications plan or articulate a priority list of goals for education

and outreach. Instead, it directed attention to priority needs and "mechanisms" to meet those needs. Small group discussions identified the needs and mechanisms in seven categories, and then a full group meeting refined the categories, summarized below. The terms used reflect those of the participants.

### Clearinghouse

There needs to be a clearinghouse that provides access to a comprehensive source of information, curricula, training, scheduling, and so on. The clearinghouse needs to be staffed by someone with it as his or her primary responsibility, and with the authority to ensure participation. An Internet Web page with links is one good way to provide the clearinghouse. That would require an additional person (webmaster) to provide the technical support. Hard copy and indexes would be needed for people without access to the Internet. There needs to be a way to evaluate and qualify the science and programs available.

### Curriculum

The curriculum for watershed education needs to speak to a wide variety of learners and the public. The information needs to be believable and consistent among providers. Most useful would be a multi-tiered structure with complex concepts that build upon simpler ones. K-12 curriculum, college and university curriculum, as well as other forms of adult education (watershed councils, forums, media, and so on) need to be linked. Effective educational programs should provide an understanding of broad principles that can be applied locally. A good strategy would be to target immediate tasks on salmon with longer focus on watershed health and its relationship to sustainability. Good models are available.

### Training

Hands-on training (peer to peer) in local projects is the most effective form of training. This requires local trainers and volunteers working with agency staff. Training and curriculum need to help people recognize the interconnectedness of issues, not just topical elements (forests, ocean, riparian, and so on). Training on organizational effectiveness is needed by watershed councils. Good training models are available.

### Involvement

The key to public involvement is increased awareness of salmon and watershed health and of how people affect both in their daily lives. Youth and families can be involved in monitoring and other hands-on activities (for example, by "adopting" a stream) to generate a broader salmon consciousness. Businesses and NGOs need to be more involved in watershed councils. Watershed councils and others need to demonstrate to private land owners that the process will address their legitimate concerns.

### Communication and Rewards

We need to communicate clearly the nature of the problem (salmon listing) and the complexity of the issue (watershed restoration). All Oregonians need to understand how urban activities (for example, sewer systems, pollution from vehicles, runoff from paved surfaces, development) affect salmon, as well as how rural activities (septic tanks, resource extraction, agricultural and livestock production, and so on) affect salmon. We need to target all residents and visitors with information on habitat restoration. Finally, we need to highlight success stories and reward good work.

*Pat Corcoran is the Extension Sea Grant community development specialist. He works often with watershed councils.*

## Educators Assess Needs

*Continued*

### Funding

Existing resources will need to be realigned, and additional resources obtained, to support the various activities of the governor's initiative. Ideas for funding offered by attendees included dedicating casinos to funding salmon restoration, levying recreation taxes, increasing fees for water users, seeking support from the private sector and foundations, supporting Kitzhaber's bottle tax, enlisting sponsors for television advertising, lobbying the legislature for funding, dedicating slot machines for restoration, providing corporate tax incentives for involvement in local education projects, and requiring an educational component as a part of all state grants.

The workshop was one event in a long-term effort to improve education and outreach to Oregonians on salmon and watershed restoration. One important result of the workshop was bringing together a diverse group of people who are involved in outreach and education. It is clear that some excellent programs already exist, and many participants took home new ideas and contacts for enhancing their current work. Even so, we need innovative ways to make improving watershed health a part of the daily lives of all Oregonians. It is hoped that the CSRI will continue to support existing programs, and in addition will fill some critical gaps that impede our progress toward our goal. In the meantime we need to continue doing what we can, with what we have, where we are.

## Clearinghouse Work in Progress

After the February meeting at OSU about salmon and watershed education (see accompanying article by Pat Corcoran), persons interested in the development of a salmon and watershed information clearinghouse met in March (Salem) and twice in April (Eugene, Corvallis) to further refine what they want—and what they believe others want—from the proposed clearinghouse.

At *Restoration* presstime in late April, this ad-hoc working group plans to refine the clearinghouse concept during the next month and produce a request for proposals (RFP) to develop the clearinghouse as it is ultimately defined. The exact timeframe on the RFP is not immediately clear, but it will be announced by the Governor's Watershed Enhancement Board (GWEB) and in *Restoration* when known.

Membership in the group has been open and based primarily on interest, and has included representatives of GWEB, state agencies, nongovernmental organizations, watershed councils, and higher education (OSU). Leadership has been provided by Louise Solliday, the Governor's Watershed Advisor in GWEB.

The premise for developing an information clearinghouse is that coordinated access to relevant information and data will be of special benefit to organizations undertaking salmon recovery efforts. A great deal of published information exists: the Coastal Salmon Restoration Initiative

(CSRI) Education and Outreach Team has produced a listing of more than 100 groups who say they do salmon or watershed education and outreach. But there is no single place organized—at minimum—to disseminate what they have produced.

In general the model which appears to be emerging for the clearinghouse is that of a central "hub" to a network of many information providers.

—Pat Kight and Joseph Cone



Oregon Sea Grant photo

*A key goal of education efforts is to involve the coastal public in restoration—no simple task.*

### Readers to Evaluate *Restoration*

Oregon Sea Grant Communications, the publisher of *Restoration*, is circulating a survey to a random sample of readers of the newsletter. The purpose of the 12-question survey is to assess reader satisfaction with the newsletter and to consider certain potential changes in content and approach. The survey, which is being mailed to coincide with the publication of this spring 1997 issue of the newsletter, also asks some broader questions relating to salmon and watershed information.

In an effort to obtain a statistically valid response, 350 recipients of the newsletter are receiving copies of the *Restoration* survey. Newsletter staff are hoping for a prompt and complete response from those who get the survey.

A summary of results will be presented in a future issue of *Restoration*.

# Bridge Over Muddy Water: The Oregon Natural Desert Association Decision

By Carrie E. Dahlstrom and Richard Hildreth

One of the most controversial battles raging in the Pacific Northwest centers on the effects of livestock grazing on water quality and stream ecosystems. Ranchers defend their land management practices and role as stewards of the public lands while environmental advocates defiantly point to trampled stream beds and deteriorating salmon habitat. Difficult as it may be to believe, a routine permit application back in July 1993 triggered one of the landmark legal decisions of the decade, which addressed this long-running battle—the Oregon *Natural Desert Association* decision.

During that hot July, a rancher applied to the U.S. Forest Service for a permit to graze cattle in the Camp Creek grazing allotment in the Malheur National Forest, which straddles the Middle Fork of the John Day River and its tributary, Camp Creek.

Environmental groups, represented by attorney Michael Axline of the Western Environmental Law Center in Eugene, sued the Forest Service in Federal District Court. Axline argued that all federal grazing permits must be “certified” by the state under § [section] 401(a) of the Clean Water Act because the potentially adverse effects of cattle grazing near and in streams are a source of pollution within the regulatory sphere of the Clean Water Act. Judge Ancer L. Haggerty agreed and held that “§ 401 applies to *all* federally permitted activities that may result in discharge, including discharges from nonpoint sources” (emphasis added).

*Carrie Dahlstrom is a law student and Richard Hildreth a professor at the University of Oregon School of Law.*

The Oregon *Natural Desert Association* decision empowers states to regulate grazing activities under § 401 of the Clean Water Act. Now states can regulate the potentially adverse effects of grazing activities by outlining mandatory conditions that ranchers must satisfy to maintain state water quality standards.

## How Section 401(a) Works

Citizens must get permission from the federal government—in the form of a “federal permit”—for many activities that affect the environment. Such activities as dredging and filling wetlands, building dams, or constructing housing developments require permits under the Clean Water Act because these activities result in a “discharge” of “pollution” (like soil or rock in streams).

Congress created § 401(a) of the Clean Water Act to allow a state government body to add its own water pollution restrictions to these federally issued pollution licenses or permits in a state certification process.

First, the potential polluter submits its federal permit applica-

tion to the state in which the discharge originates or will originate, then the state decides whether to waive the certification procedure, deny the request, or grant certification. The state may outline specific requirements and procedures that potential polluters must follow to guarantee that state water quality standards will be followed.

Historically, the state’s § 401 certification process focused on effluent limitations and other limitations and monitoring requirements. Judge Haggerty’s *Oregon Natural Desert Association* holding follows emerging trends to expand the state § 401(a) certification procedures to apply to “*all* federally permitted activities that may result in a discharge.” A state can impose restrictions on permits granted under the Clean Water Act itself (like § 404 permits for dredged or fill material) as well as federal permits issued for any activity that may result in a discharge, such as grazing.

After the *Oregon Natural Desert Association* decision, grazing permits issued by the Forest Service must now be certified by the state under the § 401 process.



The law applies to “all federally permitted activities that may result in a discharge.”

Oregon Sea Grant photo

# The Oregon Natural Desert Association Decision

Continued

## § 401(a) Applies to Nonpoint Pollution

Previously, state § 401(a) certification procedures were applied only to point sources of pollution. Point sources of pollution involve "discrete conveyances" like pipes or containers and typically do not include grazing activities. For example, a district court judge in Idaho held that Forest Service logging roads were not point sources of pollution and, therefore, were not subject to state § 401 certification.

However, Judge Haggerty, in the *Oregon Natural Desert Association* decision, completely revamped this interpretation by defining "discharge" to include both point sources and nonpoint sources of pollution. (For a federally permitted activity to be subject to § 401, it must be a "discharge" as defined by the Clean Water Act.) Now grazing activities and the resultant impacts on water quality are within state § 401 certification authority even though they are nonpoint sources of pollution.

In his ruling, Haggerty also stated that the plaintiffs (the environmental groups) were not required to show that "cattle grazing on the Camp Creek allotment 'will' result in water pollution, only that cattle grazing 'may' cause water pollution." Haggerty seemed to emphasize that § 401 certification proceedings are required even when grazing activities may only potentially result in a discharge. The questions of how much potential for discharge and precisely what types of discharges qualify remain uncertain.

## Related Decisions and the Future

In its 1994 *PUD NO. 1 of Jefferson County* decision, the U.S. Supreme Court examined the contours of states' § 401(a) certification power. The court held that minimum stream flow requirements for operation of a hydroelectric power plant are acceptable limitations for a state to impose under its § 401 certification power. However, the court refused to clearly list what other types of federal permits a

state may reach with its § 401(a) authority. So, following the *PUD NO. 1* decision, the full range of permissible limitations and conditions that a state may impose on a federal permit applicant remained broad.

The *PUD NO. 1* and *Oregon Natural Desert Association* decisions invite speculation about the future of states' § 401(a) certification power. A broad interpretation of *Oregon Natural Desert Association* and *PUD NO. 1* suggests that states have authority to impose limitations and restrictions on any federally permitted or licensed activity that may potentially result in a "discharge," which would include both potential point sources and nonpoint sources of pollution. For instance, a state could attach salmon-related water quality and minimum stream flow requirements to a wide variety of federal permits involving polluting discharges.

The future of the *Oregon Natural Desert Association* decision is still uncertain since the Forest Service (the defendant in the case) will probably file an appeal. However, both the Oregon Department of Environmental Quality (DEQ) and the Oregon Department of Agriculture (ODA) have temporary rules in place now in response to the *Oregon Natural Desert Association* decision.

In Oregon, the DEQ grants or denies § 401 certifications for federal permits. The DEQ's temporary rules offer two options for § 401 certification of federal grazing permits: (1) an individual rancher may request certification conditions for his or her specific grazing permit project from the DEQ (the site specific certification approach) or (2) a federal land management agency (for example, the Forest Service) may submit general certification conditions for all grazing permits in a geographical area in Oregon or in the entire state (the general certification approach). Under the DEQ's temporary rules, the ODA assumes primary responsibility for outlining the specific § 401 conditions and requirements.

The ODA's temporary rules mandate that applicants for 1997

federal Forest Service grazing permits fulfill several conditions such as (1) demonstrating that the "proposed grazing activity will comply with State of Oregon water quality standards"; (2) regulating the "season, timing, frequency, duration, and intensity of livestock grazing" management practices; and (3) using grazing management practices that "avoid concentrations of livestock in riparian areas and other sensitive areas and minimize livestock influence on streambank erosion."

These temporary rules will expire in August 1997 and both agencies intend to draft permanent rules sometime in the future. For now, agency personnel appear more intent on the immediate tasks of interpreting and complying with the *Oregon Natural Desert Association* decision and processing the certifications for 1997 grazing permit applicants.

The *Oregon Natural Desert Association* decision certainly continues the emerging trend to grant states more influence over federally permitted activities that affect water quality. The decision especially gives more "bite" to state § 401 certifications for federally permitted activities like grazing that can adversely affect salmon. However, the § 401(a) story continues to unfold as the DEQ and the ODA attempt to promulgate permanent rules within the 180-day deadline and the courts determine the fate of the *Oregon Natural Desert Association* decision. Perhaps it will become a valuable tool for the future of state § 401 certifications, or perhaps it will be reversed on appeal.

## For More Information

Legal citations: Federal Water Pollution Control Act (The Clean Water Act) § 401, 33 U.S.C. § 1341 (1994); the Oregon Department of Agriculture's temporary rules: OR. ADMIN. R. 603-76-0010 to -0070 (1997); the Department of Environmental Quality's temporary rules: OR. ADMIN. R. 340-48-010 to -030 (1997)

# Thoughts about Watershed Celebration

By Susan Cross

**W**hy celebrate a watershed? When watershed folks get together it's never long before we talk about the need for the general population to understand the concept of watershed, to have a working understanding of the wholeness contained in the term. *Watershed*: we need to accept and understand the movement of water, to learn to harmonize our human uses and practices with these natural boundaries. We need a population that can think in watershed-sized terms to create watershed-sized solutions. We need to think in ridge-top-to-ridge-top ways, to think of our watersheds as home, rather than thinking of our political constructs of towns, cities, and counties as home. We need to cultivate watershed identities. And that is where celebration comes in.

A watershed celebration, a river festival, or a water week, all give people opportunities to refocus their work and play. It gives us a reason to reflect on how we are connected to the water and the land. It gives us a chance to think about the basic earth ties that keep us living. A watershed celebration creates a demand and a venue for art, music, writing and theater based on our place, the watershed. It offers opportunities for exhibits and displays related to water, water quality, and the watershed to be seen by a wide audience. Exhibits and displays are from agriculture, businesses of all sorts, agencies, citizen groups, youth groups, schools and service organizations. It is a place for maps, photographs and stories. It is a time for fun, entertainment, children's activities,

*Susan Cross is a wetlands/watershed education specialist at Jackson Bottom Wetlands Preserve in Hillsboro, Oregon. She's been working hard to organize a watershed celebration there May 10. For details see the Restoration calendar.*

eating food produced in the watershed, and meeting each other.

Because a celebration is fun and invites involvement from all segments of a watershed community, a celebration offers a greater chance that many more people will become watershed literate. Action to care for our water and our planet can come only from people who are not only armed with information, but who have devel-

oped passion for a place. We see the celebration of our place as integral to the formation of bonds that lead to action.



Courtesy Unified Sewerage Agency

## The "Interconnected Story"

... We should not dismiss this idea of ritual as simply an appealing thought with little application to our technological society. The suggestion that ritual might somehow promote stewardship is certainly not without precedent where salmon are concerned. I can think of no better example of the role of cultural tradition and ritual in conservation than the management of salmon by indigenous Northwesters. The complex and diverse cultures of Northwest Coast peoples, from northern California to the Alaskan panhandle, coevolved with Pacific salmon. In elaborate art, traditions, and ceremonies these people expressed reverence for salmon and set detailed ground rules to regulate their use. The stories and rituals somehow "worked," as Northwest cultures and salmon coexisted for thousands of years.

... I think what we most need from salmon is their story. I do not mean the repetitive tale of decline that we know from the brief re-

corded history of European immigrants and the short columns of numbers in the reports of fishery managers. The tale we must learn is a far richer, ever changing, and interconnected story of nature and culture, which is programmed in the genes of salmon and recounted in the legends of ancient cultures. Encoded in the lives of salmon is a long history of survival that teaches us by example: their incredible struggle against all odds, their wandering spirit but steadfast fidelity to home, and their ultimate sacrifice to community. Through salmon we find a means for reconnecting the landscapes, watersheds, and cultures encompassed by their life cycles and impoverished by their decline. And through their restoration, we may sink our shallow roots a little deeper into this Northwest place.

—Daniel Bottom

*This excerpt from a longer essay titled "Toward a Restoration Culture" was published in Restoration, Winter 1996.*

# Publications Received

*Restoration* recently received the following publications which may be of interest to our readers.

*Cooperative Watershed Protection:*

*What Makes It Work?* Lyle S. Raymond, Jr. Ithaca, NY: Cornell University Cooperative Extension, Aug. 1996, 6 pp.

—"Conflict is a part of everyday living; it is normal in public decision making," is the premise of this useful Extension pamphlet. Available from Cornell Media Services Resource Center, 7 Cornell Business and Technology Park, Ithaca, NY 14850.

E-mail:

<Dist\_Center@cce.cornell.edu.

*An Ecosystem Approach to Salmonid Conservation.* Brian C. Spence, et al. Management Technology report to the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Environmental Protection Agency, Dec. 1996, 356 pp.

—This report by a team of scientists collects the current state of knowledge. It will be published as a Technical Memorandum by NMFS (TR-4501-96-6057) and in electronic form at

"The public is often uninformed about how natural watersheds work. People may require a substantial and often prolonged education and information program to reach a consensus on what the water quality issues are and to understand how informed public discussion can resolve them."

—from *Cooperative Watershed Protection: What Makes It Work?*

<http://www.noaa.gov>. Pre-publication copies are available from NMFS, Environmental and Technical Services Division, 525 NE Oregon St., #500, Portland, OR 97232.

*Public Funding Sources for Landowner Assistance.* Oregon Coordinated Resource Management Task Group, Nov. 1996, 19 pp.

—The pamphlet covers assistance programs for individual landowners; organizations, communities, and public agencies; and state and federal income tax incentives. Distributor of the publication is not identified, but partici-

pating agencies include ODFW and Oregon Assoc. of Conservation Districts.

*Salmon and Watershed Education Services.* Portland: Oregon Department of Fish and Wildlife, Feb. 1997, 5 pp.

—This listing of available publications, video and other materials provides an ODFW directory for more information. Available from ODFW Info. Services, P.O. Box 59, Portland, OR 97207-0059.

*Southwest Oregon Salmon Restoration Initiative, Phase 1: A Plan to Stabilize the Native Coho Population from further Decline.* Marc Prevost, et al. Central Point, OR: Rogue Valley Council of Governments, Feb. 1997, 206 pp., with appendixes.

—Described as "the first major salmonid recovery plan prepared by local citizen-directed watershed councils in Oregon," this voluminous document should be of interest to many. For further information, contact Robert Horton, Rogue Valley Council of Governments, 541/664-6676, ext. 218.



Oregon Sea Grant photo

## Salmon in Cyberspace

Salmon—or information about them—are proliferating on the World Wide Web. Oregon Sea Grant has compiled a new list of Web sites related to salmon and watersheds. Bookmark it at:

[seagrant.orst.edu/salmsites.html](http://seagrant.orst.edu/salmsites.html)

## Restoration on the Web

Oregon Sea Grant's World Wide Web site contains the full text of *Restoration* issues. Our address (URL) is:

<http://seagrant.orst.edu>

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## Calendar

Organizations involved in coastal watershed work are welcome to send the editor calendar items and announcements of broad interest. Deadline for the next issue is June 15, covering the period July 1 through September 30.

### **May Day Broadcast: Riparian Restoration and Management**

Four federal resource management agencies are sponsoring a six-hour national satellite workshop on riparian restoration and management May 1. Participants include the Bureau of Land Management, the Forest Service, the Natural Resources Conservation Service, and the U.S. Fish and Wildlife Service. Broadcast begins at 8 a.m. PDT. For more information, visit <http://www.blm.gov/partner/broadcast.html> or contact local BLM, FS, NRCS, or USFWS offices for information on broadcast locations.

### **Tualatin Watershed Celebration**

Jackson Bottom Wetlands Preserve, in Hillsboro, Oregon, is organizing a first annual celebration. The event, called Common Water, Common Ground, will be held May 10, 1997 at the Washington County Fairgrounds, noon–7 p.m. To find out more about the Celebration, the Preserve, or the Tualatin Watershed Involvement Program, call 503/681-6278.

### **Creeks and Kids**

Oregon Department of Fish and Wildlife, GWEB, and Oregon Project WET are teaming up on two watershed education workshops for educators, at Mountain Lakes Camp, June 30–July 3, and Jackman Youth and Natural Resources Center, July 7–10. Cost: \$40 per person/workshop. Registration information from ODFW Information and Education Office, P.O. Box 59, Portland, OR 97207.

## Restoration



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