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OREGON WILDLIFE

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The Cover

Multnomah Creek. Photo by Keith Swenson.

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We're from the government, and we DO want to help

I know you have probably heard the old joke about government wanting to help. It's always good for a cynical laugh when speaking at club meetings. Help like that you don't need, right?

Well, I am in government. I am also in a position where I, and the dedicated people I direct, can help. As an agency, we want very much to do just that. Yet every day, any of us within the department may encounter people with doubts, lack of trust or outright hostility toward our efforts. I've asked myself often over the years whether these negative feelings reflect some sort of general dislike of government, or whether such emotions are aimed specifically at ODFW. My conclusion is that both factors play a role.

No doubt about it – we mess with peoples lives. We affect their sport and livelihoods through direct regulations or indirectly through advice influencing land and water use decisions made by others. Does ODFW involvement in an issue or action guarantee that all interests will be satisfied with the outcome? Hardly. Over time, can disagreements tend to build up a sizeable number of upset Oregonians? You bet. Do I, as the person in charge, write off angry people as just part of doing business? No way.

I prefer to see my job, and the job of this agency, as being the source of solutions, not the center of problems. Every action ODFW takes which encourages discord forces all of us farther away from our common concern about the future of our natural resources.

There's an old assumption in government that if interests on both sides of an issue are mad at you, then you must have made a balanced decision. That "old assumption" is probably why the government joke still works. Everyone, at one time or another, sees what government does as a source of their problem. Frankly, I'm tired of that.

The mission of Oregon Department of Fish and Wildlife is "To protect fish, wildlife and their habitats for use and enjoyment by present and future generations." Can anyone argue with that goal? I don't believe so. Are there better ways, however, to focus on solutions as partners who share common ground? Absolutely. On one hand, I do not apologize for this agency's dedication to its mission. On the other hand, I do recognize that our efforts to build a consensus and seek solutions through strong partnerships have been weak.

My conclusion is that we are all engaged in a battle to protect and preserve what is special about Oregon. The primary problem, however, is identifying what is important to each of us. I promise you that over the coming months and years that YOUR Department of Fish and Wildlife will focus on building alliances that serve the needs and deliver solutions that Oregonians can support. Does this mean backing off the agency mission? No. Does this mean listening more effectively? Yes. Does it mean getting more hearts and minds directly involved in shaping Oregon's natural resource future? Count on it.

Randy Fisher, Director

UPDATE

Golden retires and takes on landowner relations role

After 33 years of service with the Oregon Department of Fish and Wildlife, Mike Golden has retired as the agency's deputy director. He will continue working part-time for the department, however, on special assignment as coordinator of a landowner relations program, according to Fish and Wildlife Director Randy Fisher.

Prior to his appointment as deputy director in 1991, Golden spent most of his career east of the Cascades as a biologist, then as a regional administrator for the agency. He worked in Pendleton, Klamath Falls and Bend before transferring to Portland.

Golden's new role will focus on improving coordination and cooperation between the Department of Fish and Wildlife and private landowners, particularly within the agricultural community of eastern Oregon.

Landowners play a critical role in providing habitat for a variety of fish and wildlife species, sometimes making financial sacrifices to do so. The challenge will be to build working partnerships that

continue to serve the needs of wildlife while also addressing the concerns of landowners.

Golden's priorities include developing cooperative programs to reduce animal damage on agricultural lands, improve wildlife habitats and better inform hunters about the key role landowners play in maintaining wildlife populations.

He will also be looking for ways to provide incentives for landowners to profit from the wildlife they support. "A big part of my job will be to listen and help take innovative ideas from concept to reality on the ground," he said.

This effort will get a big boost from a new law passed by the 1993 Legislature. House Bill 2538 establishes an Access and Habitat Board, which will include seven public representatives appointed by the Fish and Wildlife Commission. (See related article, page 6.)

Golden is confident that a growing sense of cooperation between the department and landowners, aided by the new Access and Habitat Program funding source, will allow good things to happen.

Mild summer helps wildlife prepare for winter

Oregon deer hunters found myriad hunting conditions and a variety of deer populations depending on where they spent the 1993 hunting season.

On the east side of the Cascades, deer herds fell an average of 25 percent due to one of the toughest winters in recent memory. In a crescent running from Klamath Falls through Central Oregon and up to Northeast Oregon, fawn mortality was extremely high - up to 80 percent in some areas, according to biologists - and adult mortality reached 25 percent in some areas, too. As a result, biologists reduced the number of controlled buck deer tags east of the mountains by 23 percent.

Fortunately, the long, hard winter was followed by a mild, wet summer which produced excellent forage throughout much of Oregon. Biologists reported deer in excellent shape prior to hunting season, which will translate into better winter survival. However, good forage conditions meant scattered deer herds in many areas - deer hunters often reported that they saw surprisingly few deer while hunting.

Even though deer will enter winter in much better shape, the Department of Fish and Wildlife is still preparing a plan for conducting emergency winter feeding if necessary. The effort will include options for concerned Oregonians to help either through donations or volunteer assistance. Details will be announced in early December.

Blacktail deer west of the Cascade Mountains generally were unaffected by the winter. Elk on both sides of the Cascades fared well, too, and should be in similarly good condition for winter, according to biologists.

Tip of the Hat - DEQ settlement largest ever

Oregon Wildlife's Tip of the Hat generally features poaching violations against fish or wildlife. This month feature is a little less direct, though its impact on our environment could be even more important.

A settlement and plea agreement was reached with two used-oil fuel processors in Portland and Klamath Falls, and their owner, in August in Multnomah County District Court for hazardous waste, air and water law violations. The Department of Environmental Quality found that the company was illegally processing hazardous waste generated in California and Oregon.

Terms under the settlement and plea agreement against the Portland processor are as follows:

- \$133,000 civil penalty.
- Dedicate an additional \$150,000 toward cleaning up any contamination at the site.
- The plant is required to operate under a DEQ-approved management plan and conduct annual environmental audits of the plant's operations.

In a separate action that was part of the settlement agreement, the Klamath Falls processor was fined as follows:

- \$63,000 penalty plus dedication of another \$108,575 toward cleaning up the plant.
- The plant is required to operate under a strict DEQ-approved management plan and allow an annual audit of the plant's operations.

Columbia hatchery coho returns at historic low

Fishery managers knew several months ago that coho salmon returns to Oregon's Columbia River hatcheries would be poor. Just how poor did not become clear until late October.

"This is the first time in history that we will likely not get enough coho females back to meet full-production egg needs for next year," said department fishery chief Jim Martin.

Last spring, biologists predicted that

about 200,000 coho would enter the Columbia this fall. Actual returns will be closer to 60,000 fish, according to Martin. This shortfall forced fishing closures on four Columbia River tributaries November 1 to conserve as many coho as possible for hatchery egg needs. Affected waters include the Sandy and Klaskanine rivers and Big and Eagle creeks.

Martin says fishery managers do not

know exactly why adult returns are so far below expectations, but speculate that warm ocean waters caused by El Niño could have caused high adult as well as smolt coho losses this year.

The poor coho showing follows extremely low hatchery returns for tule and upriver bright fall chinook. Biologists are not optimistic that returns will improve next year.

Legislation, budget set fish and wildlife course

By Jim Gladson

From now through June of 1995, the Oregon Department of Fish and Wildlife will be operating under specific guidelines set during the 1993 legislative process. New laws, and several related directives, set a common course that focuses on change.

The closing gavels of the 1993 Legislature ended months of tough choices and sacrifice that affected state agencies, legislators and the people of Oregon. Those who participated in the process saw heated argument, frustration and real pain. These same participants ultimately saw decisions made, lessons learned and future paths identified.

Now work turns to putting intent into practice. For the Department of Fish and Wildlife, this job means going beyond biology to dealing directly and effectively with the people of this state. In a July letter to a Portland legislator, agency director Randy Fisher outlined these new directions.

Fisher's letter noted several areas where the department and its members must improve. These included:

- **Attitude**

Training will be provided for agency personnel in maintaining good working relationships with people they contact, and on productive ways to resolve disagreements.

- **Accountability**

Administrators and program leaders will be held accountable for work implementation with clear "measures of success" for performance.

- **Customer Service**

Wildlife managers will be working with hunters and anglers to simplify complicated regulations and reduce the amount of time between applications and results for controlled hunts. Fisher also committed to a closer working relationship with the nearly 900 retail outlets that sell fishing and hunting licenses and tags.

- **Private Landowner Relations**

These landowners play an important role in providing fish and wildlife habitat and recreational opportunity. The department will expand efforts to address concerns, open lines of communication and recognize landowner contributions.

- **Information and Education**

There will be an agency-wide effort to inform local government and community leaders about department activities and regulatory actions. Department people will also expand contacts with local media to better inform the public about agency activities and regulations.

- **Interest Group Relations**

The department will expand its already high level of involvement and communication with various groups and individuals affected by agency actions. Again, the intent will be to expand communication about areas of concern.

- **Public Relations**

Fisher said the department will be more sensitive in the future to public wishes and needs. This will include finding productive ways that people can help the agency help the resource.

Government scales back The Department of Fish and Wildlife 1993-95 budget

Since passage of the Measure 5 property tax limitation initiative in 1990, Oregonians have sent a clear message to the Governor and legislators that government should be smaller and more efficient. Although the department operating budget depends largely on dedicated funds, Governor Barbara Roberts' instructions to cut positions and funds still applied.

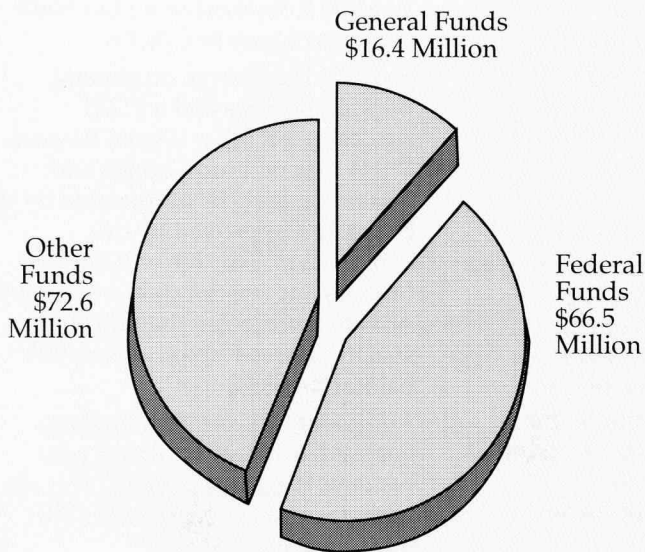
The department eliminated about 60 positions during the 1991-93 budget period to meet the Governor's guidelines for streamlining government. More than 40 additional positions were dropped from the 1993-95 agency budget proposal. In all, the department faced losing 105 positions compared to authorized 1991 staffing levels.

Actual position cuts totaled 85 for 1993-95, with a related funding cut of \$2.5 million from the previous two-year budget. Considering even minor inflation from 1991 to July 1995, these cuts equate to a nine percent cut in workforce and a total spending drop of nearly ten percent.

The initial agency budget submitted by the Governor for legislative review included closure of Trask Hatchery near Tillamook and Willamette Trout Hatchery near Eugene. Legislators accepted some staff cuts from these facilities, but instructed the department to keep the hatcheries open. Planning is now underway to see if volunteers can fill some of the staffing gaps at these, and potentially other, hatcheries. Reductions in salmon production

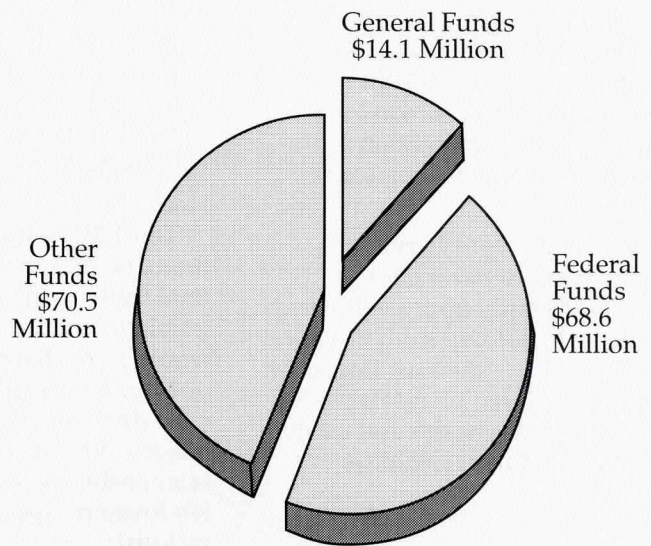
Legislatively Approved Budgets 1991 - 1993 and 1993 - 95 Compared

1991 - 93



Total \$155.5 Million

1993 - 95



Total \$153.2 Million

from some coastal stations are likely, according to fishery managers.

Management programs serving marine fisheries also sustained deep cuts as did the department's engineering staff.

All other agency divisions suffered program and staff reductions, including position cuts at wildlife areas. Legislators, however, did not accept a proposal to drop four Oregon State Police wildlife law enforcement officers.

Angling license fee increase

As deep as those cuts went, the final situation could have been even worse if legislators had not approved a \$3.7 million angling license fee increase. A \$2.25 raise in the resident angler license will take effect in 1994. Other fee changes were also part of the legislative package (see page 6 for details).

This revenue increase, the first basic fee hike in 12 years, still leaves the agency's fish division with a two-year budget roughly ten percent below the 1991-93 approved operating level.

Budget notes give additional direction

In addition to oversight of agency funding levels, legislators also have the flexibility to set specific performance expectations through a process called "Budget Notes." These directions are attached to the approved budget as narratives. The 1993-95 agency budget contains six such directives. These include:

- Long-term Funding
Calls for establishing a "Blue Ribbon Taskforce" to address viable long-term funding options for agency programs and related organizational

operations. This taskforce has already been formed, and conducted its first meeting October 20. Members will make final recommendations by May of 1994.

- Cost-effectiveness
Directs the department to consider effectiveness and efficiency as a primary consideration in management of the fish propagation program.
- Hatchery Operations
Mandates that no public hatcheries will be closed during the current budget period, and that use of volunteers be a primary focus in hatchery operations and that additional hatchery surplus and naturally-spawning coho salmon eggs be provided to the department's STEP program volunteers.
- Affirmative Action Gains
Legislators call here for the

department to use "... every reasonable effort to protect affirmative action gains with regard to females and minorities ..." if additional position changes or cuts are necessary.

- **Organizational Development**

Recognizes the Randy Fisher letter mentioned earlier and directs implementation of the organizational activities and programs outlined there. Such action will include training key department staff in communication skills, landowner relations, public participation systems and quality management techniques.

- **Private Holding of Cervids**

Instructs the department to administer recently-approved cervid (deer and elk) holding rules in a way that will have "... the least impact on individuals holding private cervids, while assuring the health and safety of livestock and native wildlife populations."

Laws feature new programs, increased fees

Legislators took a very active

interest in a variety of existing laws that govern operations of the Department of Fish and Wildlife. Most of the current laws under consideration for amendment or removal, such as those guiding state management of threatened or endangered species, were not significantly changed. Other legislation did pass, however, that offers new challenges and opportunities for the future. The following are just a few key examples of nearly 40 approved pieces of legislation that will affect fish and wildlife management.

House Bill 2538

This bill went through a series of dramatic revisions before reaching its final form. In the process, the legislation moved from one that would have changed the agency's operating mission to one that sets clear direction, with funding, for major strides in improved working relationships with private landowners. Specific provisions include:

- Creation of a seven-member Habitat and Access Board similar to the existing Fish Restoration and

Enhancement Board. Three members from the hunting community; three members from timber and farm interests; and one public member - who serves as chair - will form a body that recommends projects to the Fish and Wildlife Commission for hunting access and wildlife habitat work, as well as approaches for landowner incentives. The Fish and Wildlife Commission will appoint board members in October.

- A \$2.00 surcharge on general hunting licenses and a \$1.00 surcharge on other special licenses. These fees will fund access and habitat projects recommended by the board and approved by the commission. This fee will not give hunters any special right of access to private lands other than through specific, agreed upon, access and habitat projects.

- A lower non-resident hunting license fee, offset by higher non-resident big game tag fees. This also includes a new non-resident bird hunting stamp.

- Transfer of 15 percent of department funds from existing big

Angling License and Tag Fees 1993 and 1994 Comparisons

Document	Basic '93 Fee*	Existing Surcharges		Total '93 Fee	'94 Increases		'94 Total Total Cost
		Restoration & Enhancement	Screening		Basic Fee	Agent Fee	
Res. annual	\$12.50	\$2.00	\$0.25	\$14.75	\$2.25	\$0.50	\$17.50
Non-res. annual	\$30.50	\$5.00	\$0.25	\$35.75	\$4.25	\$0.50	\$40.50
Daily angler	\$4.00	\$1.00	\$0.25	\$5.25	\$1.00	\$0.50	\$6.75
Salmon/steelhead	\$5.50/ 10 fish**	NA	NA	\$5.50/10	\$4.50	\$0.50	\$10.50 / 40 Fish

* Fee includes \$0.50 license agent charge.

** For 1994, the requirement to buy a \$5.50 stamp for each 10 fish caught (up to 40 fish total) has been dropped. The 1994 tag will allow catching up to 40 salmon or steelhead in combination with no additional stamp purchases.

Hunting License and Tag Fees 1993 and 1994 Comparisons

	Document	Basic '93 Fee*	Fee Adjustment	'94 Increases		1994 Total Cost
				Access & Habitat	Agent Fee	
NON-RESIDENT	Resident Hunter	\$12.50	NA	\$2.00	\$0.50	\$15.00
	Hunter	\$125.50	- \$75.00	\$2.00	\$0.50	\$53.00
	Deer tag	\$100.50	+ \$75.00	NA	\$0.50	\$176.00
	Elk tag	\$200.50	+ \$90.00	NA	\$0.50	\$291.00
	Antelope tag	\$125.50	+ \$75.00	NA	\$0.50	\$201.00
	Bighorn tag	\$900.50	+ \$75.00	NA	\$0.50	\$976.00

* Fee includes \$0.50 license agent charge.

game habitat improvement programs to the new program.

- Broadening the current definition of "immediate family" for Landowner Preference big game hunting tags to include grandchildren, and providing up to four additional tags for allowing access and habitat projects on private lands.
- Allows the commission to auction or raffle ten deer and ten elk tags each year. If the tags are limited to private property, up to 50 percent of the revenue from those tag sales go to the landowner.
- Requires the department to set elk and deer population or management objectives statewide, and review these objectives every five years.

House Bill 2126 - This bill contained the state request for a resident and non-resident angling license fee increase. As noted earlier, revenues from this increase will total about \$3.7 million during the 1993-95 budget period. Fisheries programs funded by license and tag revenues will still be operating at a level nearly 10 percent lower than 1991-93. This new law also includes a change in the

salmon/steelhead tag fee. Beginning in 1994, the tag fee for 40 salmon or steelhead in combination will be a flat rate of \$9.50. The stamp requirement for each ten fish allowed will be dropped. The legislation also eliminated the ten-day angling license and replaced it with a seven-day license for non-residents only.

House Bill 2652 - This bill increased the handling fee charged by license agents from \$.50 to \$1.00 beginning in 1994. Agents who sell more than 3,000 licensing documents annually will be required to use the additional 50 cents to fund installation of a new computerized, point-of-sale licensing system. These new units should be in place at major license sales outlets by mid 1994.

Once in place, this new system should make license and tag purchases more convenient for hunters and anglers, and also allow a shorter time period between submission of controlled hunt applications and the drawing to allocate tags.

Senate Bill 1112 - This legislation came to be generally known as the "Governor's Watershed

Enhancement Bill." Legislators amended the bill into Senate Bill 81 which allocates about \$10 million from lottery revenues to the state Water Resources Department. About \$1.6 million of that total will be channeled to the Department of Fish and Wildlife with the remainder being used by Water Resources and several other state agencies.

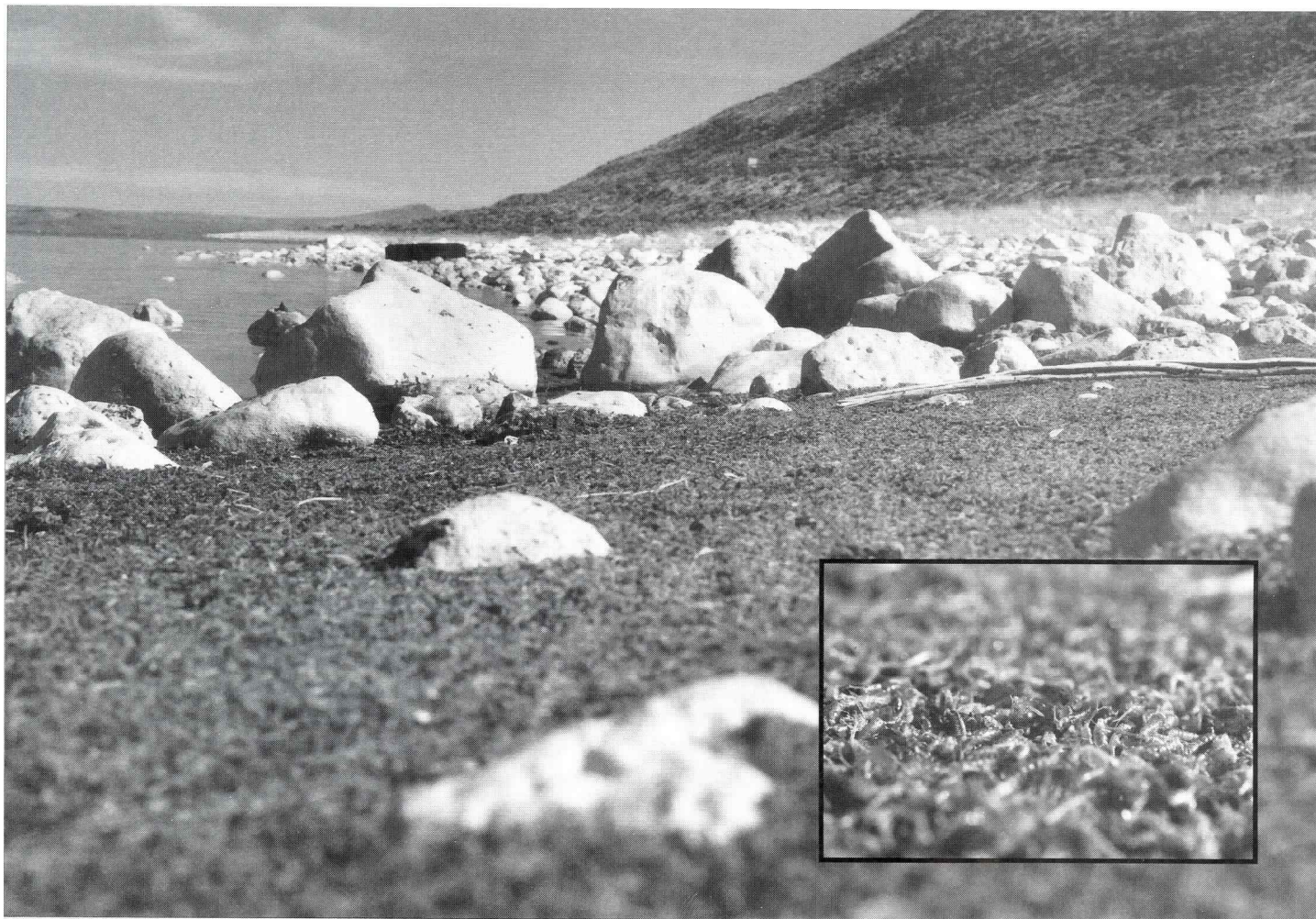
The overall goal of this new program is to "Restore the vitality of Oregon's watershed in two targeted areas of the state (ed. note: the southwest coast and the Grande Ronde basin of NE Oregon). The program will initiate actions intended to restore economic stability for the state's natural resource-based economy and achieve productive and sustainable watershed resources. In doing so, these actions would promote recovery of key anadromous fish stocks and reduce the potential of other species being listed as threatened or endangered under the federal Endangered Species Act.

Agencies are already at work designing the program. Specific projects should be identified and underway by spring 1994.

Abert Lake

This high desert oasis brings new meaning to the word "teem"

Story and Photos By Pat Wray



Millions of alkali fly larvae shells line the beach of Abert Lake between salt-covered rocks.

Ever wonder about the phrase "teeming with life?" What it means? What it looks like?

Well, a loose scientific description might read "a whole bunch of living things in a given area." And it would probably look like Abert Lake in Lake County, Oregon.

There, nestled in some pretty inhospitable country, you will find some of the best teeming in the world. The birds are easiest to see. Thousands of them, shorebirds mostly, but thousands of ducks as well. Most of them are migrating somewhere; Abert

Lake is one of those places where migrating birds can feed heavily and improve their condition before jumping off on the next leg of their journey. But it is also nesting habitat; nearly 40% of the inland population of Oregon's endangered snowy plover nests at Abert lake.

You've only scratched the surface so far. For some industrial-strength teeming, just get close to the eastern shore of the lake. Careful on your way down to the water. Rattlesnakes also teem in the rocks nearby. Notice the whitish residue on the rocks near the

lake? That is salt, precipitated out of the water. The salt precipitate is so thick because the salinity of Abert Lake ranges somewhere between twice to four times that of the ocean. More on the salinity later.

Now, look along the shore. See the dark bands of color near the water? Those are millions upon millions of alkali fly larvae shells. In the mud right next to the water you will find millions of adult flies, which have recently left their shells and are now in the business of laying eggs which you will see attached to water covered rocks in

dense, algae-like masses. Take your time in looking, because some of those algae-like masses are, in fact, algae. At least three species of algae inhabit the lake, each of which is very dependent upon the salinity of the water. Alkali flies feed on the algae.

Brine shrimp also feed on the algae. Those are the very small pinkish things rolling around in columns in the water. Because they feed on the algae, brine shrimp are also dependent upon the salinity of the lake. Those birds you saw also feed on the flies and shrimp.

By now you have realized that the salinity of the lake is extremely important to the Abert Lake ecosystem. The lake is salty because the sandy earth of the lake bed contains several different kinds of salts. These salts leach into the water above them a little at a time. The more time, the more salts enter the water.

So, if all things were equal, salts would gradually be dissolved in the water until the lake became saturated and could hold no more. Long before saturation, all algae, shrimp and flies would have died, so it's a good thing all things are rarely equal in nature.

Several influences help to keep things from being equal. Water coming into the lake is one. There are several springs that feed the lake but the primary source of water is the Chewaucan River, which dead-ends here in the lake. This additional water dilutes the salt, thus lowering the percentage salinity of the lake. Rain does the same thing, although rain is not a really frequent visitor to the area.

Conversely, anything that reduces the amount of water in the lake increases the percentage of dissolved salts. Here we are talking about evaporation, which can lower the water level nearly four feet at Abert Lake. A reduction of four feet in a lake that can approach 60 square miles is

serious evaporation.

But the loss of water is a good thing in the long term because it exposes more free salt (which has been dissolved in water but precipitated out as the lake shrank). When the salt is exposed to the wind in solid form a lot blows away. An estimated 1-2 million tons of salts were scoured from the exposed lake bed during the seven-



With Abert Rim looming in the background, Lakeview biologist Larry Conn examines an old dam structure where the Chewaucan River enters Abert Lake. A new dam will be constructed there to help restore the historic Chewaucan Marsh.

year drought cycle which ended in 1992-93.

When the water returns to its former level it does so with far less dissolved salt. And since it takes time to dissolve more from the earth, the salinity of the lake will be quite a bit lower for a period of years.

That is the situation with the lake now. Having just finished a drought, we are at the beginning of a new cycle. The water level of the lake is high with relatively low salinity. This has resulted in near ideal conditions for algae, and thus for all the organisms dependent on algae.

Although algae, brine shrimp and alkali flies can survive in relatively wide ranges of salinity, their productivity suffers at the upper levels. This had been the case during the recent drought. Reduced numbers of shrimp and flies meant a reduced food source for the many thousands of shorebirds and waterfowl that stopped in at Abert Lake during their migrations.

A reduction of shrimp also affects the lake's sole industry, shrimp harvest. The tiny brine shrimp are prized as pet fish food. Only one shrimp fisherman is licensed at Abert Lake. Shrimp harvest has increased from less than 4,000 pounds in 1981 to more than 39,000 pounds in 1990. Although complete studies have not been concluded, scientists have no

reason to believe that shrimp harvest has a significant effect on the Abert Lake ecosystem.

A project to develop a marsh at the south end of the lake should also have little effect on the lake itself. The Chewaucan Marsh Restoration Project entails an agreement between various agencies and the landowner to rebuild an existing dam near the entrance of the Chewaucan River into the south end of the lake. This dam will create a 360 acre

reservoir and help restore an historic marsh area that was drained for agricultural purposes near the turn of the century. Although some water will be removed from the reservoir for agriculture, its removal will be tied to the level of the lake itself, thus ensuring that salinity levels in the lake remain within the range of productivity of the aquatic life.

Two more proposed projects are being studied and reviewed. One is a hydro-power project. Its concept is to pump water from the lake to the top of nearby Abert Rim, then allow it to flow through power production turbines on its way back to the lake, creating electricity which can then be sold.

Another involves mining of the various salts found in the lakebed.

Both projects are being reviewed at this time. The bottom line is that any decision regarding future uses of Abert Lake will ensure that this unique ecosystem continues to teem with life.

Comprehensive study will help us learn... “...The Bear Facts...”

By Randy Henry

Studying black bears in the forests around Oakridge may be interesting, but perhaps the best is yet to come. This winter, biologists will visit the bears in their dens - up close and personal.

“That will be an interesting part of our study,” said Oregon Department of Fish and Wildlife biologist Tom O’Neil. He stood with his back to a young Douglas fir tree where bark had been shredded by a black bear. A few feet away were four stakes which were part of a snare used to catch bears in the first phase of this crucial study.

“This is a very important study,” says O’Neil. “It will give a solid foundation to Oregon’s black bear management and assure that the animals are managed in a way that best fits the needs of the population.”

The project has been paid for through a combination of federal Pittman-Robertson funds, ODFW Wildlife Division funds and a grant from the Oregon Hunters Association.

The project

“We manage black bears based on harvest records and on management guidelines that were developed from information gathered in Idaho. The goals of this study are to determine if those Idaho guidelines are applicable in Oregon. We want to be sure our management guidelines are based on known population information in the



Damage marks like these, caused by bears looking for the tender cambium layer of young fir trees, are common in the study area.

state of Oregon,” said O’Neil.

To do that, biologists had to develop a study that would track every bear, if possible, in a given area and through several seasons. They want to find out where bears travel, how many cubs a sow delivers, how many cubs survive and where they go, what bears die from, how many bears are harvested and what types of habitat they use.

Getting this type of information on another species like deer is relatively easy. In western Oregon, biologists drive a set route each year at night,

and use a spotlight to count the number of blacktail deer fawns, does and bucks they see. A count in early fall tells biologists how productive the population was during spring and summer, a count in late fall indicates how many bucks remain after hunting season, a count in the spring shows how many deer survived the winter and the ratio of fawns and adults in the total population.

But bears are much more elusive. Each bear claims a large territory and natural populations live in densities far lower than deer. The only effective way to carry out this study is to capture and put radio collars on as many bears as possible and then track them over a long period of time.

The area

The Indigo and McKenzie hunt units, near Oakridge, were chosen for this study because biologists feel this area represents an average population density in Oregon. It’s neither a densely nor a sparsely populated area, said O’Neil, so the results of the study won’t be seen as representing a best or a worst case scenario. In addition, the area is primarily public land with good road access.

Starting in early April, a team of biologists, a university student and a trapper set out to snare as many bears as possible in a subsection of the units. Biologists hung bags of bait at various



This black bear is held in a snare, beneath the bag of meat that drew it to the site. Photo series by Tom O’Neil.



This black bear is about to be tranquilized, collared, and released.



With one less tooth, a radio collar and a general physical, this bear is ready to go once the tranquilizer wears off.

locations to find out where the bears were active. The trapper then set snares at the most promising sites - up to 48 at one time.

Biologists equipped each snare with a radio that emitted a coded signal when it was tripped, allowing biologists to monitor sites daily without hiking in and disturbing them. Each snare was carefully designed to hold the animal securely but without injury. "Obviously, we're very concerned about the well-being of the animal. We want these animals released in good shape so our data reflects this population accurately," said O'Neil.

Each bear was collared, and in some cases, bears were recaptured twice showing a good saturation of collared bears in the area. By the first of July, biologists had snared 31 different bears, but only six were females. O'Neil reasoned that female bears with cubs were especially protective and wary, and stayed away from the snares.

Oregon State University graduate student Madeleine Vander Heyden assisted in the trapping, but her work really began in July. Her work will give biologists a good idea of how bears interact with their habitat.

"I will be looking at approximately 15 bears and following them extensively, trying to actually define the kind of habitat they use throughout the year. Looking specifically at their habitat use will give us a lot of insight into how bear populations are doing in this area, and how they use different types of habitat," explained Vander Heyden.

Survival is another key part of the study. "We want to know how long the bears survive. And we're looking at the different age factors as well as sex so we can see if adult males versus sub-adult males, or males versus



Madeleine Vander Heyden describes how the snare works, and uses her fists to make "bear" tracks that the bear will follow into the snare. Photo by Randy Henry.

females, survive longer," said O'Neil.

To see the actual effect of current management practices on the population, hunting will remain unchanged in these units. Fall hunting began August 28 and will continue through November 30. However, any hunter who chooses to hunt in the Indigo and McKenzie units must have their tag validated before the hunt, and the bear must be checked out after the hunt, allowing additional information to be gathered. (See sidebar.)

Blood tests taken during trapping will help biologists learn about the genetic health of the population. "We're also looking at how well the population is reproducing itself. Is it

in fact reproducing under the current hunting scenario and is the population healthy genetically speaking?" asks O'Neil.

The third part of the study is locating the animals in their dens. "We will go into the female den sites this winter to determine how many cubs they have. We will continue to follow these females to gather data on how these populations reproduce year after year," said O'Neil.

While biologists are in the dens, the bear will be tranquilized and the radio collar checked. "Each collar has a leather spacer in it designed to break away after a year or 18 months. We don't want any bear in this study sanctioned to a life with a radio collar," said O'Neil. With the new spacer in, the collar should last for another year.

The future

The study will last for at least five years. "It has the potential to run for 10 years depending on the results from the first five years," said O'Neil.

In addition, a sister study is now underway in the Starkey Unit in northeast Oregon, where habitat is substantially different. This study will provide information specific to eastern Oregon and, again, will be used to upgrade management practices in that area.

Already, biologists are awaiting data from these studies because bear management is in the spotlight. "There is some concern within certain groups that bear populations are being over-harvested, but that's what we're trying to figure out here. We want to deal not in conjecture, but in fact. This study is the first of its kind in Oregon. We're excited to get it going and find out some of these answers," said O'Neil.

Hunters in bear study area must check in

Bear hunters choosing to hunt in the McKenzie or Indigo units in 1993, and in the Starkey unit in 1994, must have their bear tags stamped by the Oregon Department of Fish and Wildlife before they begin hunting in those units, says department biologist Cory Heath.

In addition, hunters who kill a bear in the McKenzie or Indigo units this year must check out through one of five department offices in Salem, Corvallis, Springfield, Roseburg or Bend. The hunter must check

out with the head, hide with proof of sex attached, and the reproductive tract if the bear is female. Each bear must be checked out within 48 hours of the time of kill, says Heath.

Hunters may have their tags validated at the following offices: Portland headquarters, Clackamas, Forest Grove, Salem, Corvallis, Springfield, Roseburg, Medford and Bend. Additional details and information will be given to the hunter at that time.

A balanced hand on the land

*Private timber companies and cattle operators
contribute much to wildlife and hunting opportunities*

Story and Photos By Pat Wray



Road closure gates, like this one on the Noregaard Unit, are one of the keys to the management schemes employed by Boise Cascade.

In recent years, professional relationships between wildlife biologists and foresters have often been strained. There are a variety of reasons why but most could probably be lumped under the general heading of emphasis. If you make your living growing and harvesting trees, your sense of relative importance is probably quite different from someone whose primary business is the management of wildlife.

In northeast Oregon, the widespread loss of healthy trees to disease and insect infestation and extremely high timber prices have made an already difficult association much more so.

But timber management is changing rapidly, and to a degree, so are wildlife management techniques. Both disciplines are beginning to find approaches which benefit wildlife and forests.

One of the best examples of an emerging sense of cooperation and balance occurs on a large Boise Cascade land holding called the Noregaard Unit. Located north of Wallowa, in northeast Oregon, the Noregaard demonstrates a method of doing business that has earned the praise of district wildlife biologist Vic Coggins.

"Boise Cascade has done an outstanding job of balancing timber

harvest with other uses of the land, and wildlife is one of the beneficiaries," Coggins said.

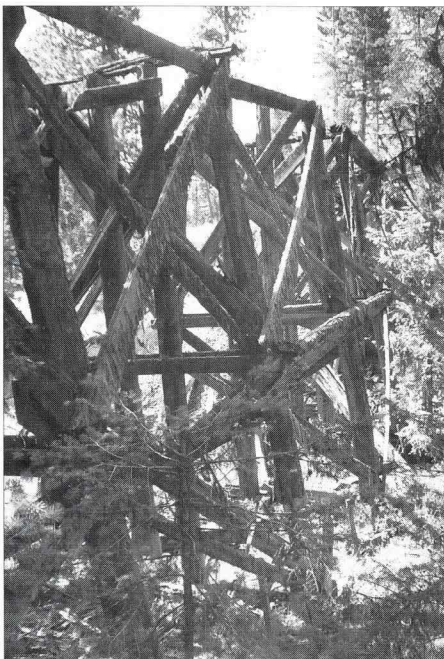
Much of Coggins' pleasure with the Noregaard holding stems from Boise Cascade's willingness to impose road closures during deer and elk hunting seasons.

"It is sometimes difficult to get public agencies to close roads for the good of wildlife," Coggins said, "But Boise Cascade has been very responsive, and those closures are of tremendous benefit to game animals. They are providing excellent recreational opportunities on private commercial forest land."

"Road closures work for us as well as for wildlife," said Bob Riggs, Boise Cascade wildlife biologist. "They hold down our road maintenance costs and minimize problems associated with vandalism and trash dumping. They contribute to a quality hunting experience and help protect wildlife as well. Road closures don't restrict public access, they just restrict vehicular access."

But road closures are not the only aspect of timber land management that impresses Vic Coggins.

"Take a look at the habitat itself," he said, during a recent visit. "It's



In the days before log trucks, Noregaard timber was transported to nearby mills by train over this trestle and others like it.



Road closure areas require alternate modes of transportation. This camp in the Noregaard Unit uses a variety of alternatives.

generally healthy; it's not overharvested and there is good forage and hiding cover. The common logging techniques used here usually result in a rapid return to cover, in contrast to clearcuts you often see elsewhere."

Harvest patterns in the Noregaard unit include relatively few clearcuts. Cutting for the most part is selective, resulting in an overall uneven age profile.

"Clearcuts might be the most efficient way to harvest trees but in this part of the country at least, we don't believe it is the best method of managing a forest for the long term...and Boise Cascade is in it for the long term," Riggs said. "Clear cutting requires replanting, and replanting is one of the most expensive aspects of forestry. By selectively cutting we can depend on natural regeneration of the forest.

"We can't afford to pretend this is all a big table top that we can treat as if it is all the same. Our foresters have to take into account differing elevations, gradients, aspects, soil types and vegetation. We try to make our harvest patterns fit the land and not vice versa."

Selective cutting does not create

the kind of expansive growth of grasses and forbs that result from clearcutting. But enough forage develops in the smaller openings left from harvest operations to support good numbers of deer and elk.

One of the interesting aspects of the Noregaard unit is the relatively high number of snags that have been left after timber has been cut.

Bob Riggs is honest about their presence. "Most of those were left during harvest operations back in the days when it was simply not profitable to remove non-merchantable timber. They are kind of an accidental benefit to wildlife. These days, many of those snags are useful as chip logs and there is more pressure to remove them as well."

Under Riggs' guidance, many snags are still left for wildlife, and the presence of a variety of cavity nesters indicates some success in the effort.

"What we want to do is take part in scientific examinations of snag usage," Riggs said. "Hopefully, studies will continue to explore just how many snags are the optimum number and what kind they should be. Then I will have something pretty solid to show to the foresters

and it won't be so much a matter of asking in vague ways that all the snags be left.

"We are definitely not perfect in the way that we practice forestry but I think the condition of the Noregaard Unit speaks very well of the management schemes we employ," Riggs continued. "I think it proves that an industrial forest can make important contributions to wildlife and public recreation, in addition to providing a profitable long-term yield of timber.

"Our foresters are very interested to read about the concepts of 'the new forestry' that federal foresters are now proposing, since many of the precepts on which it is based are things that we have been doing for years now," he said.

Perhaps the most important lesson to be learned from Boise Cascade's management of the

Noregaard unit is that profitable forestry techniques are not necessarily counter to the needs of wildlife. It is a lesson that seems true as well in the sagebrush country of southeastern Oregon. Here, rancher Ben Borelli runs a cow-calf operation much like many other Oregon ranches.

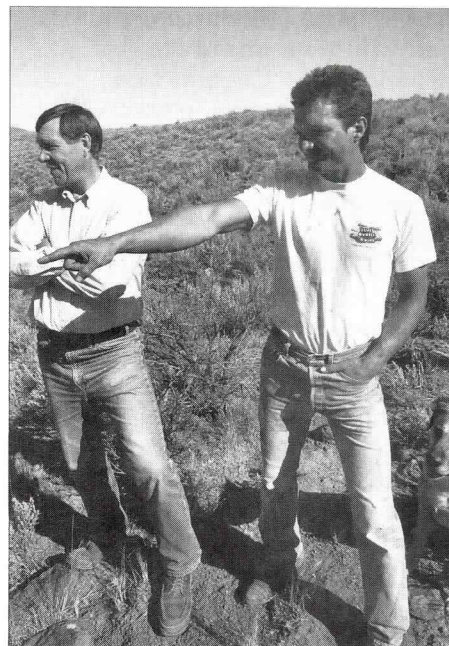
Borelli runs cattle on BLM and Forest Service land as well as on his own. His problems are the problems of most ranchers. His response to them is at once pragmatic and idealistic.

"I'm in the cattle business," he said, during a recent visit. I have to do the things that need to be done to make a profit. Some of the choices I make may have a temporary negative effect on the land and the forage there. But I don't have to make a tremendous profit every year. I don't have to run my cattle in a way that ruins the country."

Borelli fenced off the portion of Wolf Creek that runs through his property. "That riparian area was beaten up badly. Vegetation was pretty well non-existent along the banks and the banks themselves were eroded and cut out. Now the willows and alders are back; there's a lot of vegetation and we've even got some beaver that have moved into the area."

Beaver are a mixed blessing for Borelli. He welcomes the pools they'll create and the resulting wetland but he knows their dam will be built of the young willows and alder that are just becoming established. Future beaver control measures undoubtedly will be necessary.

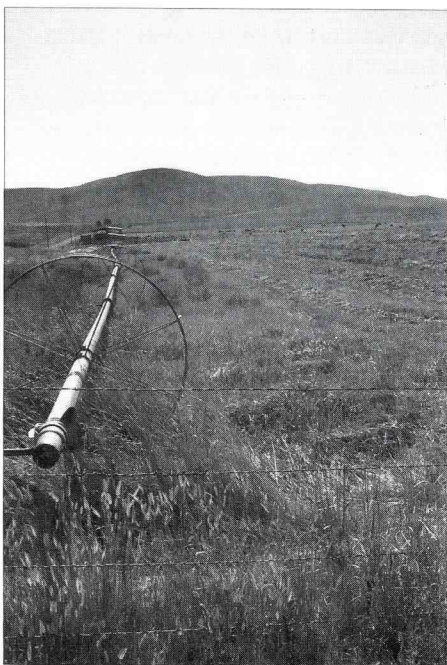
Beaver are not Borelli's only wildlife problem. "We generally



Rancher Ben Borelli, right, points out a recently-fenced section of Wolf Creek to ODFW Regional Supervisor, Al Polenz.

have more than one hundred deer in our alfalfa fields beginning in the fall. I don't mind too much. They probably get 10-15 percent of our second cutting of alfalfa but we get enough to feed our cattle over the winter. I think some people try to run more cattle than their land can carry. Those people tend to be right on the edge of having enough forage in the summer and hay in the winter. Their streams are in bad shape and they are in a constant battle with deer and elk. If cattle numbers are where they should be, there will usually be enough for wildlife too.

"I like to hunt and fish," Borelli explained. "Maybe that's part of the reason I feel the way I do about the land. I give permission for other people to hunt, too, though I screen them pretty carefully."



Second cuttings of alfalfa are sometimes iffy propositions in deer country.

ODFW, Boise Cascade cooperate in Sled Springs Unit as well

The Oregon Department of Fish and Wildlife and Boise Cascade are cooperating as well in the Sled Springs unit, which may help biologists make long-term determinations about elk vulnerability. "We are essentially compiling data now," said district biologist Vic Coggins.

"By requiring rifle and bow hunters to apply for a Sled

Springs tag, we have a way of measuring hunter effort. By combining that information with amount of cover and miles of roads, we can begin to establish links between those factors and bull ratios. Our cooperative effort with Boise Cascade may help us to begin to transfer knowledge gained in the Starkey Experimental enclosure to the real world of unenclosed forests," Coggins said.

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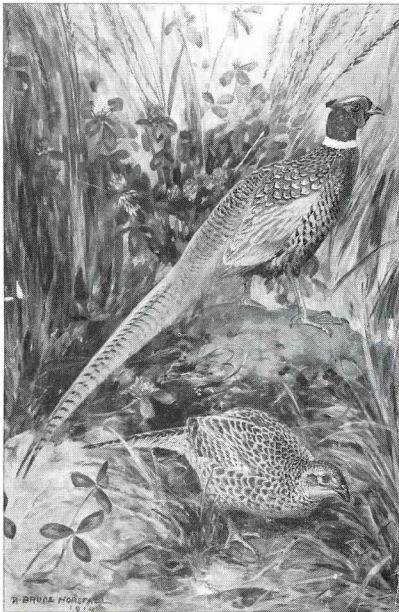
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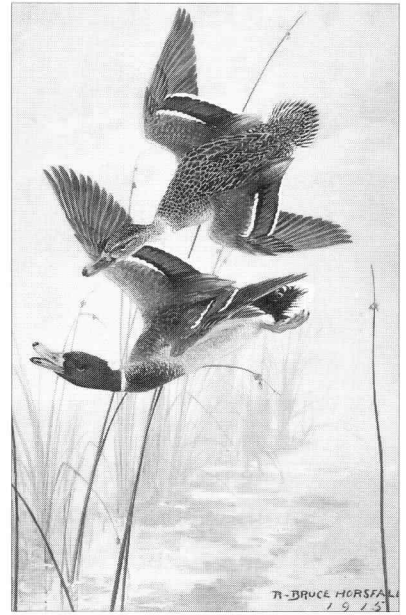
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