

# KOOTENAI NATIONAL WILDLIFE REFUGE

Bonnors Ferry, Idaho

## ANNUAL NARRATIVE REPORT

Calendar Year 1994

### Review and Approvals

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ARD-Refuges & Wildlife Date

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U.S. Department of the Interior  
Fish and Wildlife Service  
NATIONAL WILDLIFE REFUGE SYSTEM

## INTRODUCTION

Kootenai National Wildlife Refuge is a 2,774 acre area located in the Kootenai Valley twenty miles south of Canada and five miles west of Bonners Ferry, Idaho. The valley begins several miles east of Bonners Ferry and runs northward into British Columbia. The valley floor is narrow, three to five miles wide, with the river meandering northward and emptying into Kootenai Lake. Three mountain ranges with elevations over 5,000 feet above the valley floor can be seen from the refuge; the Selkirks to the west, Purcell's to the northeast and the Cabinets to the southeast. Refuge terrain is river floodplain with thirty-foot dikes around the river and creek banks. The western edge climbs the mountain foothills for a 100 - 500 yard distance.

The climate is generally temperate. Temperatures range from highs occasionally reaching 100° F to lows dipping to -20° F. Annual precipitation averages 24 inches, heavy toward snowfall but summer showers are common.

The refuge was established in 1964 when private lands were purchased by FWS with Duck Stamp funds. The establishing purpose was "for use as an inviolate sanctuary, or for any other management purpose, for migratory birds". The primary operating objective is to provide food and resting areas for waterfowl during migration.

Kootenai Refuge has good water sources, the primary one being Myrtle Creek. Most water is obtained through gravity flow from Myrtle and Cascade Creeks but pumping from the river and Deep Creek is also necessary.

Management is aimed at waterfowl maintenance but a variety of wildlife use the diverse habitat. Mallards and Canada geese are the dominant species. Up to 40,000 mallards and 4,000 geese stop in the fall migration. Most duck species of the Pacific Flyway nest here in small numbers. Other wildlife that attracts visitors include bald eagles, mule and white-tail deer, elk, moose and river otters.

The refuge attracts "local" visitors from Bonners Ferry, Sandpoint (30 miles), Coeur d'Alene (90 miles) and Spokane, Washington (125 miles). Out-of-state tourists drop in from Highway 95 for a quick trip on the Auto Tour Road in summer. Annual visitation is about 15,000 with most being wildlife observers. Waterfowl hunting, interpretive and education programs are other important uses.

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## A. HIGHLIGHTS

- Position upgrades includes Refuge Manager, Refuge Operations Specialist and Administrative Support Assistant ..... (E.1)
- Hot, dry summer (B) crested to the worst fire day in Boundary County history .. (F.9)
- Refuge had two small wildfires ..... (F.9)
- Elevated intake of river pump again prevented pumping from river at low levels resulting in lack of wetlands ..... (F.2)
- Dense cattail was opened up on Island, Snipe and Myrtle Ponds ..... (F.2)
- Conversion back to wetlands began on Wigeon, Heron and Teal Pond fields (F.2 & 4)
- Alternative crops to cereal grains were planted - buckwheat and peas ..... (F.4)
- Pest control efforts included crop rotation, fallowing, mowing, herbicide application and increase bioagent releases ..... (F.10)
- The bald eagle nest blew down, killing the single eaglet for the third time in ten consecutive years of nesting at the same site ..... (G.2)
- For the first time in several years, red-necked grebes and black terns nested successfully ..... (G.4 & 5)
- No duck trapping for banding was attempted due to dry conditions ..... (G.16)
- Waterfowl hunters dropped to the fewest number since 1969 due to dry conditions(H.8)
- A contract was let to Northern Lights, Inc. to install a buried power cable to replace the City of Bonners Ferry's overhead power line to the river pump ..... (I.2)
- A new pump was installed in the Myrtle Pump Station ..... (I.2)
- A concrete floor was poured in the last portion of oil house/equipment shed and concrete pad was replaced in front of shop ..... (I.2)
- 555 cubic yards of crushed rock was spread on the Myrtle Creek portion of the Auto Tour Road ..... (I.2)
- Farm equipment was updated with the purchase of a John Deer 6-bottom plow and 23-foot cultivator ..... (I.4)
- Much needed replacement of equipment was included in the renovation of shop . (I.4)
- Computer was upgraded to an ACMA 486 model and HP LaserJet printer ..... (I.6)

## B. CLIMATIC CONDITIONS

The year began with mild, dry conditions, January had temperatures in the 30's and 40's with occasional rain. February had a brief cold snap to -6°F. Precipitation increased with 18 inches of snow falling but rain melting most of it resulting in a very small snowpack in the mountains.

Typical spring weather occurred in March and April, alternating between sunny and warm temperatures in the 60's to rain with high temperatures down to the 40's. The last spring snowfall was 2 inches on March 21.

May was very pleasant, mostly sunny with a high temperature of 82°F. This led to a very dry, hot summer during June through August. Temperatures were in the 80's to high 90's during this period with many dry lightning storms creating the worst fire day in history for Boundary County on August 15. See Section F.9 for details.

The fall period returned to more or less normal conditions. The first soaking rain fell September 3 with cooling temperatures. A mixture of rain, sun and overcast skies was recorded in October. The first skim ice occurred October 22.

In November, thirteen inches of snow fell in the valley with much more in the surrounding mountains. Ski resorts opened by Thanksgiving this year. Impoundments froze in late November after temperatures dropped to 8°F.

Temperatures moderated in December with highs in the 20's and low 30's. A total of 23 inches of snow fell during the month giving us optimism for a good snowpack for next year's habitat

## C. LAND ACQUISITION

### 4. Farmers Home Administration Conservation Easements

The only easement administered by Kootenai NWR continues to be the seven-acre Bitetti Tract (Hoo Doo Creek) Conservation Easement in Bonner County.

## D. PLANNING

### 2. Management Plan

Routine annual management programs were completed and submitted which included the Water Management Program, water rights records and the Integrated Pest Management Program with Pesticide Use Proposals. Fire management plans and agreements were completed.

### 3. Compliance with Environmental and Cultural Resource Mandates

Manager Napier completed a compatibility determination on all secondary uses occurring on the refuge. No uses were found to be incompatible. This major exercise was required on all refuges, system-wide.

A representative of Idaho Department of Agriculture conducted a surprise inspection of the refuge pesticide program. He checked pesticide application licenses of Jimmie Reynolds and Wayne Wilkerson as well as application records. All aspects were found to be in compliance with credit going to Jimmie Reynolds who is responsible for the program.

An Environmental Assessment was prepared for the project to replace the outflow culvert through the Myrtle Creek dike from the Myrtle Pump to the creek. Engineer Chuck Weitz in the regional office prepared an application for a C.O.E. permit on the project.

The project to bury the power line of the City of Bonners Ferry is detailed in Section I.2. An Environmental Assessment was prepared and cultural resources was discussed with regional archeologist, Anan Raymond. Soil disturbance would be in hauled-in dike material on the refuge and in District 11 it would be in the road shoulder next to a drainage ditch. Anon concluded that work constituted a "no action" because digging would be done in previously disturbed or hauled-in material. No further cultural resource investigation was necessary.

## E. ADMINISTRATION



PHOTO 1. Kootenai Refuge Staff (L-R): 1) - 4) - 3) - 2)

### 1. Personnel

1) Larry Napier	GS-12	Refuge Manager	PFT
2) Jimmie Reynolds	GS-09	Refuge Operations Specialist	PFT
3) Myrna Tihonovich	GS-05	Administrative Support Assistant	PPT
4) Wayne Wilkerson	WG-08	Maintenance Worker	PFT

The status of several employees changed during the year. In May the Administrative Support Assistant position was upgraded from part time (three days per week) to full time due to increased administrative workload. Myrna Tihonovich also gained experience and knowledge in her position so was upgraded to Administrative Support Assistant GS-05. Due to increased responsibility in the positions, the Refuge Operations Specialist was upgraded to GS-09 on August 21 so Jimmie Reynolds received a well-deserved promotion. As one of the Region Director Marv Plenert's final acts before retirement, all GS-11 refuge project leader positions in Region 1 were upgraded to GS-12, which included Kootenai Refuge.

Employees received several performance awards this year. Jimmie Reynolds received a \$164 Special Act Award from Turnbull Refuge for his assistance with their biological surveys. Jimmie Reynolds and Wayne Wilkerson received \$375 and \$484 respectively for Level 4 Performance Awards.



PHOTO 2. Jimmie Reynolds and Wayne Wilkerson received Level 4 Performance Awards. LN, 10/94

TABLE 1. KOOTENAI NWR STAFFING LEVELS

FY	Permanent		Permanent		Career		Temp		Total FTE
	Full Time	(FTE)	Part Time	(FTE)	Seasonal	(FTE)		(FTE)	
94	4	(4.0)	---	---	---	---	---	---	4.00
93	3	(3.0)	1	(0.6)	---	---	---	---	3.60
92	3	(3.0)	1	(0.6)	---	---	---	---	3.60
91	2	(2.0)	1	(0.6)	1	(.89)	---	---	3.49
90	2	(2.0)	1	(0.6)	1	(.89)	---	---	3.49

### 3. Other Manpower Programs

The Boundary County Court bailiff sent four teenagers to the refuge manager to perform community service work. Three of them showed up. They worked six hours cleaning up headquarters lawns and part of the Chickadee Trail.

### 4. Volunteer Program

Thirty volunteers provided 429 hours of service in the following activities:

Maintenance (HQ grounds, sign, facilities)	343
Resource Support (erected bluebird nest boxes)	18
Public Use (education, recreation)	34
Administrative Support (administrative management)	<u>34</u>
TOTAL VOLUNTEER HOURS	429

Eighteen hours were needed to administer the program and long-term volunteer, Jerry Deiter, received \$1.25 an hour for a travel stipend, totaling \$266.

Jerry Deiter assisted with a variety of maintenance projects from January through June. Jerry volunteered 213 hours on any project that did not involve paperwork! (PHOTO 3)



PHOTO 3. Jerry Deiter volunteered 213 hours on maintenance projects. WW, 7/94

Six students from Rocky Mountain Academy erected a "trail" of mountain bluebird boxes around the refuge.



PHOTO 4. Hugh Maxwell's Valley View 6th grade class cleared litter from county roads on the refuge on Earth Day. JR,5/94

Ginny Napier, Manager Napier's wife, again contributed 50 hours of time on lawn and sign maintenance. This frees the staff for more time to do something for the critters. Manager Napier contributed 32 hours and ROS Reynolds 36 hours on various tasks including pump operation, hunting programs and "patrols".

#### 5. Funding

The following is a summary of FY94's funding compared to FY93.

FUNDS	FY93	FY94
1260 Operations & Maintenance	165,000	165,000
Special Projects	42,800	157,800
8610 Quarters Beginning Balance	5,064	5,936
9100 Fire Management	2,100	2,000

Refuge Operations and Maintenance (1260)

<u>Operations (1261)</u> .....		\$135,000
With dedicated habitat fire management	\$ 1,800	
<u>Maintenance (1262)</u> .....		\$ 38,000
<u>Special Projects (Maintenance Management System)</u> .....		\$ 157,000
86001 Rehab Shop.....	\$12,000	
86003 Rehab Oil House/Equip Shed.....	\$ 8,000	
86004 Rehab Tour Road.....	\$ 5,000	
94001 Bury Power line.....	\$70,000	
94002 Replace Farm Plow & Cultivator.....	\$24,000	
94003 Rehab South Pond.....	\$18,000	
94004 Replace Myrtle Pump.....	\$20,000	
<u>Fire Management (9100)</u> .....		\$ 2,000
Wildlife Pre-suppression and Preparedness		
<u>Quarters Receipts (8610)</u>		
Prior year carryover (FY 92).....	\$ 5,064	
FY 94 collections.....	2,613	
Withheld by RO for administration (21%)....	549	
FY 94 expenditures .....	1,192	
FY 94 ending balance .....	\$ 5,936	

6. Safety

Jimmie Reynolds was again designated the responsibility as safety officer. Formal safety meetings were held irregularly throughout the year. Emphasis was on safe work procedures and several safety inspections.



PHOTO 5. Fire extinguishers were given annual servicing by Fire-Tec of Libby Montana. JR, 6/94

Jimmie Reynolds held a defensive driving course from the National Safety Council, "Coaching the Experienced Driver". It was attended by the refuge staff and volunteers Jerry Deiter and Ginny Napier. (PHOTO 6)



PHOTO 6. Refuge staff and volunteers participate in defensive driving course. LN, 1/94

Quarterly sampling of the refuge domestic water system is required by Idaho's Department of Environmental Quality. Samples were submitted for coliform bacteria testing. All tests had negative results.

Two accidents occurred this year. Manager Napier was cutting brush from boundary signs along the Westside Road when a branch snapped back hitting him in the right eye. No lost time resulted, but a visit was made to the local eye doctor. The injury probably could have been prevented if he had worn protective goggles.

Maintenance Worker Wilkerson punctured the base of his index finger with a nail in a board while removing a small hunting blind from Island Pond. He was wearing leather gloves. Antibiotics were required from minor swelling.

#### 7. Technical Assistance

Refuge personnel responded to several requests for information on bird boxes and management of a pond to improve conditions for wildlife.

8. Other Items

## A. Training

Date	Description/Location	Napier	Reynolds	Tihonovich	Wilkinson
01/13	Defensive Driving Course from National Safety Council / Refuge Office	X	X	X	X
01/14 -17	Warrant Officer Training / Portland, OR			X	
01/21	CPR Recertification / Boundary County Comm Hospital	X	X	X	X
JAN/ MAR	Law Enforcement Annual Refresher Training - 32 hrs / Davis Monthan AFB, Tucson AZ	X JAN 25-29	X MAR 1-5		
01/31	Pesticide Recertification, 16 credits Idaho Department of Agriculture		X		X
	Pesticide Training, 8 hrs / Spokane WA		X		X
	Small Purchases & Forms Training, 24 hrs / RO, Portland OR			X	
03/07 -/11	Refuge Compatibility Training at Project Leaders Meeting / Beaverton OR	X	X		
03/31	Insect Identification & Control Workshop, 8 hrs / Bonners Ferry ID		X		X
07/12 -/13	Water Measurement Workshop, 16 hrs / Turnbull NWR, Cheney WA		X		
07/25	Driving Safety Video "Safe Plus" from GSA / Refuge Office	X	X	X	X
08/22 -/25	New Employee Orientation, 24 hrs / RO, Portland OR			X	
08/31 -9/01	Pre-retirement seminar / Portland OR	X			
09/27	Firearms Recertification, 4 hrs / Eastport ID	X	X		

B. Testing

Description	Napier	Reynolds	Wilkerson
Hearing Test, Sandpoint ID 1/19	X	X	X
Fire Shelter Testing, Turnbull NWR, Cheney WA 7/16	---	X	X
Firefighter's Step Test, Boundary County Comm. Hospital 7/22	---	Excellent	Very Good
Law Enforcement Physical Exam	1/4/95	12/12/94	---

C. Meetings or Visits

Date	Attendee/Visitor(s)	Description
May 18-19	Napier	R.O. Portland, OR - discuss refuge compatibility, budget status and attend retirement party of Refuge Supervisor Sandy Wilbur.
August 16-17	Napier	Attend Region 1 and Region 6 Ecological Services Coordination Meeting, Spokane WA
September 13	Napier	Attend Zone Fire Meeting, Turnbull NWR, Cheney WA
October 20	Scott Stenquist Tom O'Brian	Regional Office visitors - orientation visit for pest management and control.
December 7	Napier	Attend Idaho Department of Environmental Quality Meeting on domestic water treatment and testing

F. HABITAT MANAGEMENT1. General

In the small acreage of the refuge there is a wide diversity of habitat. The banks along the Kootenai River provide riparian habitat from dense shrubs to a continuous line of cottonwood trees. The flood plain now is a mosaic of wetlands, croplands and grassy uplands. Rising from the valley is the base of the Selkirk Mountains with a block of coniferous forest along the western side of the refuge.

An annual cycle of manipulations is necessary to provide the desired habitat. Water manipulations drain water from the land in the spring and control its inflow to stabilize pond levels in summer and flood more area in fall. Farming manipulations produce a crop of cereal grain for cooperator farmers to harvest and to provide standing grain for wildlife food. Uplands are managed to produce desired plant species and forms of growth to meet wildlife needs.

Weather had a great affect on habitat this year. The extremely dry, hot summer quickly depleted stream flow resulting in little water left in impoundments by fall.

## 2. Wetlands

Water management is similar each year. Fall and winter flooded habitat is drained in the spring. Permanent impoundments are maintained through the summer and fall flooding begins in September

Water sources include primarily Myrtle Creek and Cascade Creek. Pumping is important from the River Pump, Myrtle Pump and Deep Creek Pump. However, all these sources are dependent upon high levels of the Kootenai River. The river level fluctuates greatly due to managed releases from Libby Dam upstream. At “normal low” levels with releases of 4 - 8 thousand c.f.s., the riverbed is full but still below all three pump intakes.

Creek flows maintained pond levels into July. Cascade Creek is the only source of water for Cascade and Cottonwood Ponds and flows were only a trickle by August, so these ponds were very low by late fall. Myrtle Pump broke down so that source of water was gone for the year. The other pumps were of limited use in the fall because the river level was below the pump intakes most of the time.



PHOTO 7. Kootenai River levels in September and October were below the refuge pump's intake. LN, 9/94

This left Myrtle Creek to provide most of the water for impoundment maintenance late in summer and the fall flooding. Inflows dropped to 2 c.f.s. in September and October.

In June, to assist with pond level maintenance, the portable Gator pump was placed at Dave's Pond outlet and water was pumped from the Center Ditch into Dave's Pond. But, by late July, the Center Ditch did not have enough water to pump. The river pump normally maintains Dave's Pond, but could not get water from the river. The refuge's largest pond quickly dried down to ten acres by September.



PHOTO 8. Dave's Pond, the largest on the refuge, normally 120 acres, was less than 10 acres due to river levels below the pump's intake. LN, 9/94

The Gator Pump is also used to pump water into the South Pond from Deep Creek. This too was only possible periodically because the river must back up Deep Creek to provide high enough levels for pumping.

As a result of all the above, fall wetlands were very limited. The central part of the hunting area, several hundred acres which is normally flooded by late September, remained mostly dry until well into November, close to freeze up.

Some efforts in marsh rehabilitation were undertaken this year. A D-5 Cat with wide marsh tracks was borrowed from Turnbull NWR. Dense stands of cattail were opened in Island, Snipe and Myrtle Ponds. The following photographs illustrate the work to intersperse cattail and open water.



PHOTO 9. Clearing cattail in Myrtle Pond, using Turnbull NWR's D-5 Cat. JR, 3/94



PHOTO 10. Interspersed cover and water in Myrtle Pond after dozer work. JR, 3/94

Land use changes were begun in the south end of the refuge. Prior to 1979, the area between Island and South Ponds was managed as permanent wetland. It received little waterfowl use in the fall but did get good summer use by a variety of birds. To increase the quality of fall waterfowl and hunting habitat, these areas (Wigeon, Heron and Teal Ponds) were drained in summer and the drier uplands on the east side were put into grain production (North and South

Heron Fields). In some years when flooded early, they provided good hunting but generally most waterfowl use was in spring. The lower, western portions of these units grew dense stands of reed canary grass which were flooded November through March. These areas were nearly worthless to wildlife. Efforts began to convert the area back to permanent ponds and moist soil wetlands.

The areas of Wigeon, Heron and Teal Ponds were dried and most stands of canary grass were plowed under. It would have been desirable to burn the canary grass first but we did not have time to write a prescribed burn plan. The plowed ground was disced several times during the summer. In the fall, any green canary grass was treated with Rodeo. The area was flooded over winter and will remain as wetland next summer.

### 3. Forests

The west side of the refuge lies on the base of the Selkirk Mountains. A variety of coniferous trees covers approximately 400 acres including red cedar, hemlock, Douglas fir, white pine and ponderosa pine. No logging has been done for at least 30 years. The forest land adjacent to the refuge is logged so the different management provides a variety of forest habitat.

In the valley, cottonwood trees line the river, Myrtle Creek and Deep Creek. They surround Cottonwood, Cascade and Goldeneye Ponds where the highest density of wood ducks is found. The high beaver population is continually working on the large trees.

### 4. Croplands

Two cooperator farmers continue to do refuge farming. They produce the negotiated crops and harvest 60% as their share and the refuge share is left standing for wildlife food. The following table displays the crops and their distribution.

TABLE 2. 1994 Crop Program

Crop	Acres	Cooperator Share	Refuge Share
Winter Wheat	193	193	-----
Spring Wheat	51	51	-----
Spring Barley	281	79	202
White Dutch Clover	26	26	-----
Peas	10	-----	10
Buckwheat	21	-----	21
TOTAL ACRES	582	349	233

North and South Heron fields (31 acres) will be removed from the crop program after this year and be managed for wetlands. Field 27 (27 acres) in the northwest area of the refuge, has been in quack grass for 20+ years. This year it was plowed, then disced several times and treated with Roundup. A cooperator then seeded it to winter wheat.

Several attempts were made to grow crops as alternatives to cereal grain. One cooperator had Dutch white clover in Field 15-east. Growth was sparse and Canada thistle was so dense that over half the field was disced up. The farmer made no money on that operation.

On ten acres that were fallowed last year in Field 14-2, field peas were planted as the refuge share. Production was fairly good but weed competition was high; Canada thistle on the low, moister soil and wild oats on the higher, drier soil. The peas were flooded early in November and ducks consumed the crop.

In North and South Heron Fields, 21 acres of buckwheat were planted as an alternative crop for the refuge share. The refuge purchased the seed and the cooperators seeded at a rate of 60 pounds buckwheat and 130 pounds fertilizer per acre. Early in the summer the fields were yellow with a dense stand of mustard and followed later by considerable amount of wild oats. Production of buckwheat was disappointing compared to an excellent crop produced one year back in the 1980's.

A total of 38 acres were removed from the farming program this year. They were fallowed by force account for weed control. Areas were 18 acres in Field 19-10 and 20 acres in Field 14-2.

The extremely dry conditions allowed one of the earliest harvests on record in Boundary County. Crop yields in the valley were average or above. Winter wheat yielded 80 - 100 bushels per acre and barley about a ton per acre.

#### 5. Grasslands

The larger blocks of grassland (30 - 50 acres) primarily are in the center of the refuge adjacent to Myrtle, Center and Dave's Ponds and on the south and east side of South Pond. These areas were seeded to intermediate and tall wheatgrass in the late 1980's. Best response was around South Pond. The Myrtle Pond field never grew well and has fairly dense Canada thistle.

Other strips of upland are quack grass and dikes are reed canary grass which does provide standing residual cover for early nesters like mallards.

#### 9. Fire Management

- 0           The interagency operating plan with the Idaho Panhandle National Forest was renewed which provides the refuge assistance from the Bonners Ferry Ranger Station for wildfire suppression beyond the refuge's capabilities. The annual Fire Dispatch Plan was updated. A prescribed burn plan was not written this year.

Last summer, North Idaho experienced the worst fire season since 1910. It began July 23, a month earlier than the previous worst season ever recorded. Dense smoke filled the Kootenai Valley in late July from huge forest fires in Washington.

August 15 became the worst fire day in history for Boundary County. A weekend of passing lightning storms started 14 new fires making it the worst day in the 95 years the records were kept. By August 18, firefighters had responded to 480 fires in the county (the average is 120 fires per season). Miraculously none of them erupted into large infernos that were experienced in north-central Washington. None of them occurred on the refuge.

Two small wildfires did start on the refuge earlier in the year. On March 25, a fire was discovered along the river dike opposite Dave's Pond. The Auto Tour Road and the river served as fire breaks and the fire was creeping through fine grass and rose bushes. The fire was discovered at 11:30 a.m. Reynolds and Wilkerson responded with the refuge pumper and had

the fire out by 12:30 p.m. About ½ acre was burned with no significant loss of habitat. They discovered the cause of the fire to be a broken power line which was still live! Wilkerson guarded the site and Reynolds notified the City of Bonners Ferry electrical crew who responded immediately, turned off the power and repaired the line. (PHOTO 11.)



PHOTO 11. A ½ acre wildfire was ignited by broken City power line. JR, 3/94

The second fire was on April 1 when a planned burn escaped and entered the refuge. A grazing leasee on state land south of the refuge burned off canary grass in high winds. The fire escaped and ran up the south dike onto the refuge. Quick response by Maintenance Worker Wilkerson prevented the fire from escalating. Fingers of burning grass were extinguished before they reached more than 50 yards into the refuge. Less than ½ acre burned with no negative effects.

#### 10. Pest Control

The refuge has two pest control programs. One involves the farming program and the other is the refuge's efforts to control plants required by the County noxious plant ordinance.

In the farming program, the goal is to reduce or end the use of herbicides but also allow cooperator farmers to receive an economic benefit in farming on the refuge.

Crop rotation cannot be done effectively at this time. The refuge does not have the acreage to develop a rotation system using cooperator farmers and still produce 150 - 200 acres of cereal grain for waterfowl food. Along the lines of crop rotation some alternative crops are considered. Problems arise when approval of new pesticides are needed such as insecticides to control clover seed weevils. This year two alternative crops were tried on the refuge share of crops. They were field peas and buckwheat. No herbicides were applied and, as expected, the weed competition was heavy particularly from Canada thistle and wild oats. By allowing the weed invasion, a problem for future years was created. Peas were planted on land that was summer fallowed the previous year. With no control, wild oat seed existing in the soil was allowed to grow and put another crop of seeds in the soil that will remain viable for 7 - 10 years.

A form of long-term rotation was initiated when Heron Pond fields were removed from the cropland program and returned to wetland management. A long term quack grass field (Field 27) was placed into the cropland program. It should be free of wild oats at this time.

A University of Idaho study found favorable results of barley seeding methods to compete with wild oats. The methods that they used were narrow row spacing, heavier seeding rate and fertilization in the rows rather than broadcast spread. These elements were incorporated on the refuge share of barley fields. Eight-inch row spacing is already used by the farmers and is about the narrowest. Seeding rate of barley was 160 pounds/acre of pellet fertilizer was applied in bands of the seeding rows. Any heavier rates would probably burn the barley. Farmers also apply anhydrous ammonia in the soil before seeding. No herbicides for wild oat control was used on refuge shares but some control for Canada thistle was done. Cooperators were permitted to apply herbicides for weed control on their shares.

Results cannot be compared directly between refuge and cooperator shares. Higher, drier sites usually have more wild oats than sites with more moisture. Some cooperator's fields have considerable wild oats even with herbicide application, but refuge share fields with no herbicides had light to heavy stands over most of the sites where it would grow. Dramatic results could be seen in the difference whether or not herbicides were applied to Canada thistle control. In Field 15-west a definite line could be seen in the field where thistle was sprayed.

Napier and Reynolds attended a tour of the University of Idaho wheat test plots in District 11. No magic variety was found to be exceptional for the Kootenai Valley. Napier also attended University of Idaho research trials for wild oat control in wheat and barley at the Ball Creek Ranch. Results of products and methods were discussed. Crop experts advocated herbicide application each year over entire fields for wild oat control, something the FWS pesticide policies completely disagree with.

The cooperators hire a commercial spray company for chemical treatment of the refuge croplands. Chemicals are applied in accordance with approved Pesticide Use Proposals and under conditions of the farming agreement.

The following table displays the commercial sprayer's operation on the refuge.

Trade Name	Chemical	Application Rate (lbs AI/Acre)	Target Plant	Acres Sprayed
See 2,4-D	2,4-D ester	0.93	Canada thistle, Mustard & other miscellaneous	505
Assert	Imazamethabenz- m-toluic acid, et al	0.40	Wild Oats	155
Avenge & Assert	Difenzoquat methyl sulfate and Imazamethabenz- m-toluic acid, et al	0.69  0.20	Wild Oats	15
Roundup	Glyphosphate	0.80	Quack grass	74

The battle to control noxious plants is fought on several fronts by refuge personnel. A combination of mechanical, chemical and biological methods is used.

An experimental program of mechanical control was conducted last summer. Hound's tongue (*Cynoglossum officinale*) used to be isolated plants with its pesky, pill-shaped, Velcro-like covered seeds. Around five years ago populations seemed to explode, forming continuous stands in grasslands. Studies point out that up to 60% seed reduction may be achieved by clipping flower heads just before going to seed. ROS Reynolds removed the upper portion of the plants by hand with a weed-whacker on a 1.5 mile section of Myrtle Dike between the start of the Auto Tour Road and Myrtle pump. Seeds of hound's tongue may be viable for up to ten years and the plant is a biennial, so this method of control is labor-intensive and long term. Reynolds spent eight hours on this effort.

Seven fields, totalling 111 acres, were manipulated by a combination of mechanical and chemical means. Generally, each field was plowed or disced originally, followed by occasional disking or cultivating to dry out grass rhizomes and other weeds. Finally, each field was sprayed near the end of the growing season to eliminate any re-sprouted plants. A total of 180 hours was used on mechanical control and 52 hours of chemical control on these fields.

The purpose of manipulation on this land was three-fold. Three fields (65 acres) were in cropland with a goal to reduce competing Canada thistle and wild oats. Two parcels of upland (11 acres) needed control of teasel and Canada thistle and will be seeded to grass. The third area, 35 acres of Wigeon, Heron and Teal Pond fields, received control of reed canary grass for restoration to wetlands.

Herbicide applications were the responsibility of ROS Reynolds. A daily pesticide log book was kept during the spray season. The majority of spraying was done from an enclosed tractor with a trailer boom sprayer. Smaller areas were treated with the ATV boom and hand nozzle. A large part of the herbicide application this year involved treatment of large fields discussed above. Control of noxious weeds was concentrated on small areas of high public use - along county roads and refuge service roads and trails where seeds were likely to be spread. The following tables display the herbicides used, target species and acreage sprayed.

Trade Name	Chemical	Application Rate (lbs AI/Acre)	Acres Sprayed	Application Hours
Cenex Class 40-A	2-4-D amine	2.00	100.5	33.5
Roundup	Glyphosate	2.00	76.1	22.0
Rodeo	Glyphosate	2.15	64.2	18.5
Banvel	Dicamba	2.00	49.5	15.0
Escort	Metsulfuron methyl	0.04	19.6	10.0
Transline	Clopyralid	0.41	0.5	2.0
<b>TOTALS</b>			310.4	101.0

TABLE 5.  
TARGET SPECIES AND ACREAGE SPRAYED  
BY REFUGE PERSONNEL - 1994

Target Species	Acres Sprayed	Percent of Sprayed Acreage
Miscellaneous Plants	* 113.48	47
Canada Thistle	99.84	41
Common Tansy	18.59	8
Absinth Wormwood	4.11	2
Spotted Knapweed	3.81	1
Teasel	1.64	< 1
Common Mullein	0.84	< 1
Hound's Tongue	0.57	< 1
Fiddleneck Tarweed	0.35	< 1
<b>TOTALS</b>	<b>** 243.23</b>	<b>100</b>

\* - Most of this acreage was in conjunction with fallowing grainfields or preparations for marsh restoration.

\*\* - 49.53 acres of Canada thistle and 17.64 acres of Common Tansy was treated a second time with Banvel and Escort, respectively.

This was the third year that biological control of noxious plants was used. Release sites were determined by areas not easily accessible to equipment, areas inside the bald eagle nest security zone and where there is a potential for damage to non-target plants.

Dr. Gary Piper from Washington State University again supplied the insects. Coordination and provision of the insects worked well and we anticipate using him as the source for biological control in the future.

Four bioagents were put out this year to help control spotted knapweed, common mullein and dalmatian toadflax. The insects for knapweed supplement similar releases last year. The releases this year were as follows:

Qty	Bioagent	Noxious Plant	Cost
200	Seed-eating Moth ( <i>Metzneria paucipunctella</i> )	For Spotted Knapweed	\$200
1,000	Seed-head Gall Flies ( <i>Urophora affinis</i> ) and ( <i>U. Quadrifasciata</i> )	For Spotted Knapweed	\$ 60
800	Seed-eating Weevils ( <i>Gymnetron tetrum</i> )	For Common Mullein	\$400
100	Leaf & Flower-eating Moth Larvae ( <i>Calophasia lunula</i> )	For Dalmatian Toadflax	\$ 50

On May 19, the seed-eating weevils were released on mullein plants at four sites; on the west and east side of Myrtle Pond, on the dike between Center and New Ponds, and along the shop to barn service road. On June 1, the seed-eating moths for knapweed were released on the south dike, west of the Deep Creek pump site. On June 7, the seedhead gall flies were released on knapweed at the beginning of the Auto Tour Road, near last year's release of the same insect. On June 15, the moth larvae for dalmatian toadflax were released at the Cascade Creek overlook. A few of the caterpillars were found on the plants from natural occurrence.



PHOTO 12. Cascade Creek overlook - release site for dalmatian toadflax leaf-eating moth larvae. JR, 6/94



PHOTO 13. Leaf-eating moth larvae released on dalmatian toadflax. JR, 6/94

The refuge is using considerable resources, both in funds and staff time, on Integrated Pest Management. A combination of herbicide application, mechanical and biological contract methods will continue. The IPM program cost \$9,440 this year. The following tables display the various costs.

TABLE 6 1994 INTEGRATED PEST MANAGEMENT PROGRAM COSTS	
Control Method	Costs
Planning	\$ 4,157
Chemical Application	2,902
Mechanical	1,668
Biological	713
<b>TOTAL COST</b>	<b>\$9,439</b>

TABLE 7 COST OF SOUTH MARSH RESTORATION	
Description	Costs
Chemical Used: Rodeo - 30.25 gallons	\$3,191
Chemical Used: Roundup - 29.58 gallons	1,550
Diesel Fuel for Fallowing	448
Labor - 145 hours	2,759
<b>TOTAL COST</b>	<b>\$7,948</b>

#### 11. Water Rights

The refuge has the following four water rights.

Myrtle Creek	10.0 c.f.s.	streamflow
Cascade Creek	1.0 c.f.s.	streamflow
Kootenai River	7.0 c.f.s.	pumping
Deep Creek	2.2 c.f.s.	pumping

Water was used from all four water sources this year.

14. Farmers Home Administration Conservation Easements

The refuge administers the seven-acre Hoo Doo Creek Easement in Bonner County. The boundary was fenced last year. This year in June, ROS Reynolds made an inspection and sprayed a half-acre of Canada thistle with 2,4-D and Banvel using the ATV boom.

G. WILDLIFE

1. Wildlife Diversity

No new species were added to the refuge list this year. The checklist is wide ranging due to the great diversity of habitat. It includes 310 vertebrate species made up of 220 regularly occurring birds, 45 mammals, 7 amphibians, 6 reptiles and 22 fish.

2. Endangered and/or Threatened Species

The peregrine falcon and bald eagles are found on the refuge. Peregrines are irregular visitors and Reynolds saw one on New Pond on September 15.

Bald eagles continue to increase in Idaho. During the mid-winter count, 1,040 balds were counted in the state, surpassing last year's high of 903. Nesting also is encouraging. In Idaho's panhandle, 21 active nests produced 24 young compared to 20 young from 18 nests last year.

On the refuge, nesting did not fare well. For the tenth consecutive year, balds hatched young from the same site, three cottonwoods on the northwest side of Dave's Pond. Hatching occurred April 18 and nearly identical to 1992, the nest blew down on June 8 killing the single young. This was the third time the nest has blown down at the same site. And again the pair completed a new nest the fall for use the following spring. The pair began carrying nest material to the site in late September.

Annual use on the refuge totaled 1,036 use days. Peak use was 7 and 8 balds during late November - early December.

The willow flycatcher is listed as a sensitive species in Region 1, however, other agencies do not list it as a species of special concern in Idaho. They have been monitored somewhat on the refuge since 1986 as an indicator of neotropical birds nesting on the refuge. A survey on 5 transects records singing males each June. A total of 18 males were heard this year which was an increase from 12, 11 and 9 in 1991 - 1993, respectively.

3. Waterfowl

The following table compares annual waterfowl and coot use with the refuge objectives over the past five years.

TABLE 8. ANNUAL WATERFOWL USE DAYS (CALENDAR YEAR)

	Swans	Geese	Ducks	Coots
1994	7,147	134,253	1,677,712	30,030
Objective Level	4,000	150,000	3,000,000	—
1993	5,805	113,820	1,779,834	86,485
1992	9,716	204,330	2,683,625	100,625
1991	4,130	207,025	2,290,974	108,850
1990	10,920	238,350	2,304,064	154,945
1989	6,552	136,332	2,654,344	130,270

Tundra swans stopped during their spring and fall migrations. The use periods were similar to last year, only the numbers were slightly higher. They arrived February 28 and peaked at 250 in mid-March. The last stragglers departed by the first week of April. A single swan again stayed on the refuge most of the summer for the third consecutive years. In the fall they were present from October 22 until November 19, with a peak of 200 during November 6 - 12.

Canada geese were present all year. They lingered on the refuge with a peak population of 800 during February 1 - 15 and most migrants left by March 20. Two snow geese made a rare appearance during the latter half of March. The population began exceeding summer numbers in August. Canada's peaked at 2,000 around September 24, dropped sharply to 1,000 by October 1 on the opening of hunting. By October 3, only 300 remained around the refuge. Fifty to 100 were present for the rest of the year.

The breeding population of Canada geese remains fairly constant, between 50 and 60 pairs. This year 54 pairs were estimated. Nesting proceeded on the average time schedule. Incubation began about March 17 and the first brood was seen April 15. The average Class I brood size was 6.2. After the first week, broods gather together so they cannot be counted individually. Thirty-one of the 36 nest structures were used. Production was estimated to be 88 based on a gosling count just prior to flight stage. This was very similar to last year's production of 86.

Annual duck use continued to decline since 1992 but spring use was over 16 times higher than last year due to some open water from the start of the year. Mallards numbered 5 - 6 thousand from January through March. They peaked at 7,000 during March 20 - 26. Pintails were the second most abundant duck, followed closely by American wigeons. From the spring peak of 8,475, ducks dropped to the breeding season level of 1,360 by the end of May. As ponds dried up from lack of available water, ducks continued to leave the refuge all summer. By the end of June only 635 ducks remained. By late July early hatching broods were on the wing and duck numbers slowly increased. The fall migration was small, with numbers up and down between September and late November. Populations ranged between 8,400, 4,480 and 13,180 during this period. By the end of November most impoundments froze over, but 3 - 5 thousand mallards were present to the end of the year.

Mallards made up 84% of the total use with wigeons second by a distant 4%. ROS Reynolds recorded an uncommon species when he checked two white-winged scoters in a hunter's bag on November 18.

Duck production is calculated by multiplying the number of breeding pairs by an assumed nesting success which is then multiplied by average brood size. A fairly reliable county of duck pairs can be made with available staff time and this data provides annual trends. An assumed nesting success must be used since time has never become available to conduct nest searches. The nest boxes must be maintained so use and success is obtained for wood ducks and goldeneyes.

Duck production objectives were established for certain species as indicators of use of different habitats. They include mallard, wood duck and redhead. Production data are concentrated on these species.

The breeding population of ducks declined significantly this year. Only the wood duck has maintained a relatively stable population. Decreases of others cannot be attributed to less habitat this year alone. Blue-winged and cinnamon teal concentrate along the water ditches which remain about the same over the years, yet these populations continued to decline annually.

TABLE 9. WATERFOWL BREEDING PAIRS 1989-1994

Waterfowl	1989	1990	1991	1992	1993	1994
Canada Goose	60	54	51	56	62	54
Mallard	226	218	242	186	265	165
Wood Duck	28	32	25	21	44	26
Redhead	84	87	88	25	40	25
Other Ducks	428	411	356	240	275	163
<b>Total Ducks</b>	<b>766</b>	<b>748</b>	<b>711</b>	<b>472</b>	<b>624</b>	<b>379</b>

The refuge has a long standing duck nest box program. This year 70 boxes were available and checked. The following table displays the results of the nesting effort.

TABLE 10. RESULTS OF 1994 DUCK NEST BOX PROGRAM

	Number of Nests	Abandoned Nests	Successful Nests	Production of Young
Available Boxes	70			
Unused	11	16		
Used by Wildlife	59	84		
Wood Duck	22	4	18 82%	132
Common Goldeneye	23	5	18 78%	105
Hooded Merganser	2		2	10
American Kestrel	5		5	19
R.S. Flicker	5		5	30
Starling	2	1	1	4

TABLE 11.  
WATERFOWL PRODUCTION ON KOOTENAI NWR FROM 1990-94

	<i>Objective</i>	1990	1991	1992	1993	1994
Canada Goose	<i>100</i>	155	160	78	86	88
Mallard	<i>1,000</i>	325	363	279	400	350
Wood Duck	<i>100</i>	130	122	130	210	144
Redhead	<i>200</i>	234	186	54	85	54
Other Ducks	<i>---</i>	910	740	449	597	341
<b>Total Ducks</b>		<b>1,599</b>	<b>1,411</b>	<b>912</b>	<b>1,292</b>	<b>889</b>

American coots also declined in numbers from last year. They are present about the same time each year, between April and November. Peak use was 200 in May, late September and mid-October. Production was down at 60 compared to 150 last year.

#### 4. Marsh and Water Birds

Five species of grebes use the refuge. The horned, eared and western grebes migrate through the valley. None were seen this year, nor were any common loons. Summer residents are pied-billed and red-necked grebes. Pied-billed grebes arrived by the end of March and were last seen in mid-October. They were present in small numbers throughout the refuge and did nest here.

The red-necked grebe is used as an indicator species with an objective to provide for 3,500 use days. Last year and in 1991 none were present. No production occurred for several years. This year one pair arrived in late May and nested in Center Pond and raised one chick. They left in mid-August for a total of 189 use days.

Great blue herons are an indicator species with an objective to provide for 3,000 use days. Herons continue to nest on an island in the Kootenai River east of Bonners Ferry. Adults and juveniles feed on the refuge but no nesting has ever taken place. The refuge was frozen at the beginning of the year so the first herons did not return until early February. During spring months, 6 - 8 herons were present and increased to 25 by late June. Peak use was mid-July and mid-September at 30 birds. Most departed by late November. Occasionally a heron was huddled around an open hole in the ice in December. Annual use was 3,458 use days.

The sensitive bitterns, soras and Virginia rails were heard much of the summer. Soras arrived in late April and bitterns and Virginia rails were first heard early in May. They departed during late September.

Sandhill cranes made a brief visit last fall. On October 2, Manager Napier observed 40 sandhills lift off, spiral upward and move south.

## 5. Shorebirds, Gulls, Terns and Allied Species

Few shorebirds migrate through North Idaho. Annual migrants include greater and lesser yellowlegs, several sandpipers, long-billed dowitchers and occasionally, Wilson's and northern phalaropes and American avocets. Regular nesters include killdeer, common snipe and spotted sandpipers.

Weather dried many ponds creating mudflats which received some increased use by shorebirds. The two species of yellowlegs are indicator species representing shorebirds. Combined, their annual use was 3,696 use days compared to 2,632 use days last year.

Ring-billed gulls are the only gulls that regularly use the refuge. As usual, they were present between April and November. Spring use peaked at 10 in early April and in the fall small peaks occurred in the latter part of August (15) and late October (15). An appearance worth documenting was 150 Bonaparte's gulls in late October.

Black terns are used as an indicator species. They arrived on May 10 which is about usual. They peaked at 30 in mid-May and declined to around 15, the summer population. After three consecutive years of no nesting, black terns finally produced young again. This year they nested in the south part of Center Pond rather than Red Head Pond. The first nest was noted on June 15 with a total of 8 estimated nests. On August 9, twenty juvenile black terns were counted on the refuge along with 15 adults. Annual use was 1,960 use days compared to 798 last year.

## 6. Raptors

Quite a variety of birds in this category use the refuge. Several are used as indicator species and more effort is made to document their status. Others are mentioned with general information available.

Turkey vultures are not common but seen periodically from spring through early fall months. Usually two to four are seen.

Ospreys are used as an indicator species. Still no nesting has occurred on the refuge. Another nest platform was put on a pole on the dike between Redhead and New Ponds. This is in addition to the pole platform in Dave's Pond. Ospreys continue to be seen "fishing" regularly in summer. Nesting is widespread along the Kootenai River and on lake shores in the county. They were present from mid-April through mid-September which is usual. Use was down due to less open water ponds. Three or four ospreys were seen all summer compared to four to eight last year. Annual use was 406 use days compared to 630 last year and the objective of 700 use days.

An unusual incident happened last July. One quiet afternoon, a loud noise on the roof of the office surprised Tihonovich and Napier. Upon investigation they found a fish about a foot long on the lawn. Apparently an osprey dropped it while flying over the office. (Photo 14)



PHOTO 14. With a loud bang, a fish bounced off the office roof, landing on the lawn - an osprey dropped its dinner! LN, 7/94

Only the deep snow in winter pushes the northern harrier from the valley. They returned in late January and peaked at 8 birds by the end of March.. Three pair were present all summer and presumably nested. No fall increase in harriers were noted as 2 - 3 were present until mid-December when they all departed. Annual use of 1,288 use days was less than last year which was the exact objective of 1, 600 use days.

Being a nester of the far north, rough-legged hawks are present early and late in the year. The mild winter allowed them to stay in the valley as four were counted early in January. Numbers gradually dropped until the last hawk departed the end of April. The first was recorded again in late October, increasing until six were present all of December. Annual use was 469 use days, exceeding last year's use and also the objective of 300 use days.

American kestrels are summer residents. They usually arrive in April and depart in September. This year five duck nest boxes were used by kestrels and produced nineteen young.

Great horned owls are commonly seen on the refuge. Occasionally the small owls are seen, particularly the pygmy owl. This year four short-eared owls were seen in early November in grain stubble fields.

## 7. Other Migratory Birds

The route for the Migratory Bird Laboratory's dove call survey passes through the refuge. Results give a trend of the dove population. Results were identical to last year with four doves heard and none seen.

Magpies, crows and ravens are year-round residents on the refuge. One or two black-billed magpies stayed over winter. An estimated three or four pairs nested on the refuge.

Common crows were more abundant this year. They numbered 15 at the start of the year and increased to 50 by early April. The summer's population was 25 - 30. They peaked at 100 in September when crows gathered to feed in grain stubble. From October to the end of the year, crows gradually decreased from 60 to 15.

About five common ravens stay over winter on the refuge. They increased to 20 during late March and about 10 is the summer population. The fall peak was about 35 ravens in September.



PHOTO 15. Eastern Kingbird - a common neotropical bird along the Auto Tour Road. LN, 8/94

## 8. Game Mammals

Since many of these animals live on and off the refuge, no population data is gathered on them. Significant observations are documented.

White-tailed deer use the refuge year-round, while mule deer are generally seen down in the forested foothills only in spring months. White-tails like the winter wheat fields in spring.

As many as twenty or more head are seen grazing on the lush growth. The population appears healthy with good reproduction. ROS Reynolds documented a doe giving birth to twins near the Auto Tour Road. (Photos 16 & 17)



PHOTO 16. White-tail deer in labor beside the Auto Tour Road. JR, 6/94



PHOTO 17. Twin fawns shortly after birth. JR, 6/94

Elk generally use the refuge in the fall and winter. They usually enter from the south end of the refuge and move northward to grain fields. In late November, 74 head were counted, of which about 7 were bulls and they were primarily spikes.

Moose usually appear on the refuge in May. Cows drive off their yearlings at this time, prior to having new calves. These wandering yearlings are highly visible, unafraid and enjoyed by refuge visitors. About ten moose used the refuge last summer. They included a cow with one calf, a cow with twin calves, two or three yearlings, and one large and one small bull.

(Photo 18)



PHOTO 18. Some of the moose spending the summer on the refuge. JR, 9/94

There were five sightings of at least three black bears this year. Two sightings were along Myrtle Creek beside the Auto Tour Road. One was a brown one on the north dike and one was a black one crossing the Westside Road. A hunter shot a small black bear about a quarter mile south of headquarters.

Two sightings of cougars were reported. On January 27 at 9:30 p.m. a refuge neighbor saw three cougars on the Westside Road near the Island Pond overlook. On February 20 at about 10:00 p.m. people reported a large cougar crossing Westside Road within a quarter mile north of headquarters.

Manager Napier saw a bobcat cross the Westside Road about a quarter mile south of the refuge on November 28. Observations are much less frequent than cougars.

Coyotes are common on the refuge. Two litters are usually raised in the valley and probably one or two more are produced in the forest.

River otters are seen at irregular intervals. One litter of four young was recorded which is about usual.

Striped skunk populations remain low. One was seen several times around the south parking lot. This was the first observation in several years.

The beaver population continues to be high which creates problems in water management. A new problem is that they are gnawing holes in water control structure flash boards, which are down deep under the water surface. Past attempts at live-trapping have been minimally successful since beavers avoid the traps or simply go around them.



PHOTO 19. Long-tailed weasel - a rarely observed resident. LN, 9/94

#### 10. Other Resident Wildlife

Pheasants, grouse and turkeys are found in the area. Only a few ring-necked pheasants may be found in certain areas of the valley. None were seen on the refuge. A sparse population of ruffed grouse exists along the forested west side of the refuge. Males began drumming in late April and were most often heard west of Cottonwood Pond. Twenty Merriam's turkeys made an appearance late in March and stayed around headquarters for about a month and then moved off.

The ground squirrel in the area is presumed to be the Columbian ground squirrel based on distribution maps. However, its physical features look more like the California ground squirrel. "When time permits" it would be interesting to check into this. A colony of these squirrels exists along the county road in the rock cut west of Bonners Ferry. This year for the first time one was seen around the refuge's South Parking Lot in April and June and one on the river dike near the exit of the Auto Tour Road.

Northern painted turtles are common and often present visitors a close-up view when digging a nest, particularly on the Auto Tour Road along Myrtle Pond. Turtles were first seen sunning on logs in mid-March. By early May they began traveling in search of nest sites.

11. Fisheries Resources

A wide variety of fish live in refuge ponds and creeks. Brown bullheads and yellow perch are the most commonly seen in ponds and rainbow trout in Myrtle Creek.

Kokanee did not move up Myrtle Creek to spawn for the seventh consecutive year.

16. Marking and Banding

Due to dry conditions, no duck trapping was attempted this year.

**H. PUBLIC USE**1. General

The number of visitors rebounded from a slump last year. The 17% increase this year was identical to the 17% decrease last year. Wildlife observation continues to be the main attraction for visitors. Most are out-of-state tourists passing through town on summer vacations. Waterfowl hunting dropped off in recent years due to limited hunting habitat and smaller populations of ducks. Requests for interpretive programs are increasing and consume considerable staff time in April and May. The following table compares public use between 1993 and 1994.

TABLE 12. PUBLIC USE ACTIVITY DURING CY 1993 AND 1994

Public Use	CY 1993		CY 1994		% change from 1993
	Number of Visits	% of Total	Number of Visits	% of Total	
Interpretation	585	4%	804	4%	+37%
Environmental Education	180	1%	75	1%	-58%
Wildlife Recreation					
Consumptive	874	6%	754	4%	-14%
Non-consumptive	13,387	87%	16,058	88%	+20%
Non-Wildlife Recreation	290	2%	645	3%	+122%
TOTAL ACTIVITY VISITS	15,316	100%	18,336	100%	
TOTAL VISITORS	12,875		15,095		+17%

The only leaflet order this year was a revision and update on Kootenai's General Information leaflet. Ten thousand copies were ordered.

## 2. Outdoor Classrooms - Students

After twelve consecutive years, "Conservation Days" sponsored by the Boundary County Soil Conservation District and held on the refuge, was canceled due to logistic problems in getting various agency personnel together at the same time. It is planned to continue next year.

While the Conservation Day targets all the fifth grade students in Boundary County, the Bonners Ferry Junior High School arranged a similar all-day program for the seventh graders on May 31<sup>st</sup>. Seventy-five students participated with sessions presented by ROS Reynolds - nesting biology, Idaho Fish and Game - radio telemetry and law enforcement, Forest Service - habitat requirements and Crown Pacific Inc. - forestry.

## 4. Interpretive Foot Trails

Island Pond Nature Trail is 1 ½ miles long around the pond. A leaflet with accompanying numbered posts along the trail provide self-interpretation. This activity is primarily used by teachers with their classes. Interpretive used totaled 221 visitors while most trail use is for wildlife observation.

## 7. Other Interpretive Programs

Most requests for visits com from schools in the spring. From April through June, ROS Reynolds arranged programs for 16 classes. Most were elementary schools from Bonners Ferry, but a first was a visit from four classes at Coeur d'Alene High School, 90 miles away. Another new thrust was visits in the fall. Three classes visited in October. ROS Reynolds traveled to Sandpoint and gave presentations to two Fish and Wildlife classes at the high school.



PHOTO 20. ROS Reynolds gave an orientation to a visiting school class. LN, 5/94



PHOTO 21. Flag-raising ceremony during Cub Scout Day Camp. LN, 6/94

Bonnors Ferry Cub Scout Pack 114 held a day camp on the refuge June 24 and 25. Forty scouts from four Bonners Ferry dens and one from Libby, Montana participated. Manager Napier conducted nature walks and discussions on ethics.



PHOTO 22. Archery training was one activity during two-day Cub Scout Day Camp. LN, 6/94

## 8. Hunting

The refuge has two hunting areas. Big game and grouse hunting are permitted on the 400 acres of forest west of the Westside Road. Waterfowl hunting is permitted on the southern third (approximately 900 acres) of the refuge east of the Westside Road.

Big game hunters generally move through the narrow strip of refuge land to adjacent Forest service lands. An estimated 130 deer hunters, 10 elk hunters and 3 bear hunters used the refuge. An estimated ten deer were killed. A small black bear was shot by a hunter about 1/4 mile south of headquarters. Now grouse hunting was observed.

Duck hunters had another split season but expanded to 69 days. In the northern part of the state it ran from October 8 through December 4 and December 22 through January 1. Goose season ran from October 1 through January 8. Bag limits were the same as last year, being 4 ducks with restrictions (only 3 could be mallard [ 1 female only], 1 pintail, 2 redheads and 1 canvasback). The goose limit of 4 dark geese was unchanged.

The refuge experienced the driest conditions for opening of hunting in over 16 years due to our inability to pump water from the Kootenai River. Only Redhead, Snipe and South Ponds had significant water. Most hunting blinds north of Center Parking Lot were dry. Hunters were encouraged to find other areas in the Panhandle in which to hunt.



PHOTO 23. Duck hunters had to set up portable blinds near the receding pond levels. JR, 10/94

The following table compares hunter use and success in 1994 with the previous five years. The number of hunters this year was the lowest on the refuge since 1969 due to the drought. Peak use was only 39 hunters during mid-season. The season's average daily bag was 1.56 ducks which was better than last year. Mallards again comprised over 80% of the bag. With fewer hunters and ducks, the quality of hunting seemed to improve. The percentage of crippled or lost birds in the total kill decreased considerably at 13.6%, down from the usual 17 -21%.

TABLE 13. COMPARISON OF HUNTING USES 1989 - 1994

Year	1989	1990	1991	1992	1993	1994
No. Hunter Visits/Season	901	936	1,021	946	785	536
Peak Hunters/Day	61	90	66	59	63	39
Daily Duck Limit	4	4	4	4	4	4
Season's Average Bag/Day	1.97	1.94	1.97	1.50	1.41	1.56
% of Total Kill Wounded/Lost	18.3%	20.8%	17.3%	21.0%	21.6%	13.6%

#### 9. Fishing

Only Myrtle Creek is open to fishing on the refuge. Fishing is allowed during Idaho's stream season (May 28 - November 30). Use was minimal due to the low stream flow and better waters elsewhere in the county. Use was an estimated 75 anglers.

#### 11. Wildlife Observation

Visits in this activity varied greatly over the past four years as shown in the table below.

TABLE 14.  
USE BY WILDLIFE OBSERVERS

Calendar Year	Observers
1991	9,547
1992	15,837
1993	13,387
1994	16,058

The increase and variability comes from the summer tourists traveling through North Idaho on U.S. Highway 95. This tabulated use is a combination of use both on foot trails and the Auto Tour Road. Visitors interested in seeing wildlife comprised 88% of total activities.

12. Other Wildlife Oriented Recreation

Three observation/photo blinds are available. Serious photographers do not use them as they prefer small portable blinds in the habitat. The South Pond blind does provide reasonable opportunity for close water bird photography. Rarely do visitors spent any times in the blinds. Rather, they stroll over to them for a look and move on. An estimated 13 photography visits occurred on the refuge.

14. Picnicking

Facilities are located at two sites. The most used is a table on the headquarters lawn which is handicapped accessible and highly visible. This receives considerable use as a lunch break by visitors. The second site along Myrtle Creek has two tables and a fire ring but requires a walk of several hundred yards. Estimated picnicking use is 580 visitors.

16. Other Non-wildlife Oriented Recreation

Winter conditions allowed limited sports activity on the refuge. Thirty-five cross country skiing visits occurred on refuge trails. Thirty ice skaters used the designated area.

17. Law Enforcement

Vandalism is present like on most refuges. While it is not as serious as some places, it is frustrating for the time and money needlessly required to correct the damage.



PHOTO 24. Shooters used a shotgun on the Moose Overlook sign. LN, 8/94



PHOTO 25. Shooters used a .45 on the North Parking Lot leaflet box. JR, 3/94

On March 25, ROS Reynolds wrote a warning to a Kootenai Indian for fishing in Myrtle Creek during the closed season. He said he could fish there anytime he wanted but did leave without incident. We must continue to pussyfoot around the issues of Indian hunting and fishing rights because we cannot get a decision from the Solicitor's Office. But we may not want one! The guidelines under which we operate are directions from the area manager in the early 1980's (remember the old area offices?). The Kootenai Indians can legally hunt and fish anytime on "open and unclaimed" lands. This means that Kootenai's are presently shooting deer on U.S. Forest Service land in the spring with no interference from Idaho Department of Fish and Game. The FWS Area Manager decided that the refuge was not "open and unclaimed" land since it was in private ownership and that FWS purchased it. Fortunately, no major violation or confrontation has occurred. Incidents are handled by a warning or some violation other than hunting in a closed season.

On April 23, Manager Napier wrote a citation to a juvenile hunter that was hunting with his father. They both said the juvenile shot a turkey on the refuge in the upland game hunting area. Turkeys are not regularly present on the refuge, but a flock of about twenty showed up around headquarters for a week - during the spring turkey season in the Panhandle. Signs had been posted at the refuge entrances and along the Westside Road that turkey hunting was not permitted. Only grouse hunting is permitted during the appropriate season on the refuge. Turkeys are not planned to be added to the list of huntable upland game as their infrequent appearance has higher value for observation than for hunting. The citation was given to the FWS Senior Resident Agent in Boise. No prosecution was made since the offender was a juvenile. The turkey was given to the local Ministerial Association for food distribution.

On October 28 at 11:30 p.m. Manager Napier was awakened by a vehicle with loud music passing his house and proceeding out the Auto Tour Road. Since the refuge is open only during daylight hours, he hightailed it after the vehicle, catching up before it exited the tour road. However, the vehicle would not stop and sped off toward Bonners Ferry. Napier followed it into town but lost it. He gave the vehicle description to patrolling City Police and shortly they apprehended three juveniles from nearby Troy, Montana. The 14-year old driver had no driver's license and had "borrowed" his neighbor's car without his permission!

On the following night at 10:30 p.m., Napier was going out to turn off the river pump when he discovered the cable had been dropped which closed the Auto Tour Road. He apprehended a vehicle with two men and wrote a citation to the driver for being in a closed area. The offender disagreed with the \$100 fine and wanted a court appearance (pending at year end).

Manager Napier had to talk several times to a new neighbor, Steve Schwilling, about his dogs running on the refuge. The problem recurred several times, but eventually he either got rid of, or kept, the remaining dogs around his house.

## **I. EQUIPMENT & FACILITIES**

### **1. New Construction**

A five-foot high chain link fence was installed around the new propane tank at headquarters for security and a visual screen. The work was done by American Fence Company of Hayden, Idaho for \$725.



PHOTO 26. New chain link fence around shop's propane tank provided security as well as a visual screen. LN, 12/94

## 2. Rehabilitation

The on-going plan to get the City of Bonners to change their power line along the Kootenai River from overhead to a buried cable took a new turn. Northern Lights, Inc., has offered to take over responsibility to provide power to District 11 drainage pumps and the refuge river intake pump. Their reason is that they do have the responsibility to provide rural power. This would allow the City to give up the spur line which has not been cost effective to operate. Manager Napier had meetings with the Bonners Ferry City Council resulting in a letter of agreement turning over the responsibility to Northern Lights. The power source would change to Northern Lights line on the east side of District 11. They would bury a power cable next to a farm road westward to the District 11 pumps, use the existing overhead river crossing to the refuge and then bury the cable southward in the dike top to the refuge pump.

The cable is a single phase line and all the pumps are three-phase. The City of Bonners Ferry agreed to purchase and install two three-phase converters to the District 11 pumps. U.S. Fish and Wildlife Service agreed to purchase and install a three-phase converter to the refuge river pump. Agreement from the District 11 Drainage District board was obtained in this conversion of the power source.

The work was an MMS project to assist the City in replacing the power line. With this change, a purchase order was written to Northern Lights for \$70,000 to install a buried power cable to the refuge river pump. Work is planned for early next spring.

A three-phase converter was purchased for \$3,249 and will be installed to the river pump after the power cable is in.

The Myrtle Creek pump had failed to operate, so in May the Worst Company of Coeur d'Alene was contracted to look at it. When the pump was pulled and examined, it had a shaft broken in two places, the impeller badly cracked and the lower bearing badly worn.. The 30+ year old pump was supposedly rehabilitated in 1979 and seldom used so the extreme wear was unexpected. Making new parts was a better option than repairing the old ones. Delays were experienced including locating a foundry in Kansas City to make the parts and the death of Mr. Worst, Sr., who was working on the project. The new pump became operational in mid-December which was too late for any pumping this year. Total cost was \$20,000.

Pipe riser water control structures are beginning to show their age. The Teal Pond structure rusted through and had to be replaced.



PHOTO 27. Teal Pond outlet BEFORE replacement of structure. WW, 8/94



PHOTO 28. Teal Pond outlet AFTER replacement of structure. WW, 8/94

J&M Concrete got contracts for two projects. They poured a concrete floor in the remaining portion of the oil house/equipment shed for \$3,875. They also replaced the broken concrete pad in front of the shop for \$1,975.

B.F. Concrete was lower bidder for 555 cubic yards of 3/4 inch or minus crushed rock at \$9/cubic yard for a total of \$4,999. The rock was tail-gate spread on the Myrtle Creek dike portion of the Auto Tour Road.

### 3. Major Maintenance

The John Deere 350B crawler obtained off excess two years ago has wide tracks. However, we found out it is not water tight for marsh work. The clutch assembly had to be repaired by Sims Implement for a cost of \$3,214.

### 4. Equipment Utilization & Replacement

MMS projects were funded for a larger plow and cultivator. Sims Implement Company was the low bidder for a John Deere 3710 ridged 6-bottom plow at \$11,686 and a John Deere 23 1/2 foot cultivator at \$12,422.

With the renovation of the shop, some equipment was replaced including a bench grinder (\$397), air compressor (\$419) and pressure washer (\$710) as well as \$2,371 in an assortment of new tools.

### 6. Computer Systems

The computer was upgraded to an ACMA 486-33 VESA microcomputer with monitor and console for a cost of \$2,213. A Hewlett-Packard LaserJet 4 printer was purchased for \$1,336. WordPerfect 5.2 for Windows was purchased for \$298.

## J. OTHER ITEMS

### 1. Cooperative Programs

The refuge staff participated in the following programs:

- Mid-Winter Bald Eagle Survey for the National Wildlife Federation (Reynolds).
- Dove Call Count for FWS Migratory Bird Laboratory (Napier).
- Quarterly notes for American Birds to National Audubon Society (Reynolds).
- Served on the Regional Non-Game Wildlife Advisory Committee to Idaho Department of Fish and Game (Napier and Reynolds).
- National Fishing Day hosted by Bonners Ferry Lions Club, U.S. Forest Service and Idaho Fish and Game (Napier).
- Assisted Turnbull NWR with duck pair counts (Reynolds).
- Assisted Little Pend Oreille NWR with law enforcement during opening week of deer hunting (Reynolds).
- Borrowed a dozer from Turnbull NWR for marsh rehabilitation (Wilkerson).

The refuge loaned the mounted golden eagle to Boy Scouts Troop 114 for Eagle Scout ceremonies.

The refuge provides storage for Idaho Fish and Game. Two river boats for the Sturgeon Study are parked outside in the maintenance area. The Conservation Officer stores his snowmobile in the equipment storage shed.

On September 21, Manager Napier and ROS Reynolds responded to an emergency along with Idaho Fish and Game, Search and Rescue, Sheriff's Department, Boundary Volunteer Ambulance Service, and the Sacred Heart Hospital Helicopter from Spokane, Washington. A bow hunter had punctured his thigh with an arrow and cut an artery. His location was in the mountains about 10 miles up Ball Creek which is 15 miles NW of the refuge and 20 miles from Bonners Ferry. That morning the hunter, along with his wife, was looking for an arrow that he dropped. He ran against it in the brush and it punctured his thigh. The hunter was a nurse and determined that an artery had been cut. He attempted to stop the blood flow and his wife had to leave him. She had to ride a mountain bike three miles down a trail behind a locked Forest Service gate, drive the vehicle seven miles down a road to the nearest house with a telephone, then wait to guide assistance back to her husband!

The sheriff's office received the 911 call. Idaho Fish and Game Conservation Officer, Greg Johnson, happened to be in the sheriff's office and departed immediately. Only the Forest Service and he have keys to the locked gates on Forest Service land. Johnson stopped at the refuge office to get our field stretcher and massive trauma first aid kit. ROS Reynolds accompanied Johnson and Napier followed in his pickup. Johnson picked up the wife and proceeded to the scene. Logs had to be moved from the gated trail. Napier waited at the road junction to the gated trail to direct the ambulance. After they went through he walked to the scene, clearing the trail better. As he arrived, so did the helicopter from Spokane. The hunter was carried on the refuge stretcher about 300 yards to the landing. The hunter was flown to Spokane where the artery was repaired and he was home in two days. Everyone felt good about this traumatic happy ending!

### 3. Items of Interest

Larry Peterson, the first Maintenance Worker on Kootenai Refuge, died on December 7 at the age of 87. Larry worked on the refuge from its inception in 1965 until 1972 when he retired. Larry remained active at his rural home until his death.

The "in lieu of tax" check was given to the Boundary County Commissioners by Manager Napier on April 25. The check for \$19,858 was 78% of their full entitlement. Commissioners were reminded that U.S. Senators can release necessary funds to meet the deficit.

This year Boundary County Commissioners approved a resolution to establish a Public Lands Advisory Committee. The committee will review public lands proposals and develop recommendations on policies related to the uses of public lands and resources including water, agriculture, timber and wood products, recreation, wildlife and mineral resources. Forty-two sub-committee members have begun working to develop committee policy and direction:

A BLM land surveyor, John McCauley from Yakima, Washington, did some work for the Kootenai Tribe this fall. He was attempting to survey lines of tribal entitlements in District 11 and needed to locate corner posts on the refuge. So, the refuge benefitted by having several corner monuments exposed that were buried in agricultural fields or in thick brush.

The refuge staff is active in the local community:

Larry Napier, Refuge Manager	Bonnors Ferry Kiwanis - serves as liaison with sponsored Boy Scout Troop 114
	Judge for County Spelling Bee
	Committee on Kootenai Valley Ducks Unlimited
	Assisted with July 4th Fireworks Display
	Judge for Cub Scout Pinewood Derby
Jimmie Reynolds, Refuge Operations Specialist	Judge for Cub Scout Pinewood Derby
	Committee on Kootenai Valley Ducks Unlimited
	Active in Local Athletics - League Basketball and Volleyball
Wayne Wilkerson, Maintenance Worker	Fire Chief of Naples Volunteer Fire Department
	Active in Local Athletics - League Volleyball and Soccer
	Coached a Youth Soccer Team

#### 4. Credits

Napier wrote the report. Due to numerous delays, it was not completed until after his retirement. Administrative Assistant Tihonovich produced and assembled it.

Photograph credits were as follows:

LN - Larry Napier  
JR - Jimmie Reynolds

WW - Wayne Wilkerson  
JD - Jerry Deiter (volunteer)



Low water levels at the Kootenai National Wildlife Refuge will mean reduced waterfowl populations as this year's hunting season begins.

## Refuge to be dry for hunting opener

by Refuge manager Larry Napier

The Kootenai Wildlife Refuge near Bonners Ferry has the driest conditions for the opening of the waterfowl hunting seasons in over 16 years. Few, if any, of the hunting blinds in the center rainfield will have water and in the south end, only South Pond has water.

Island Pond, usually used heavily by ducks, is nearly dry. Only the two marsh units in the northwest part of the hunting area have good water levels.

With the decreasing water level also comes a decline in waterfowl population, with numbers below normal on the refuge. Canada geese peaked last week at 2,000, with a projected 1,600 to 1,800 expected to be present at the opening of the goose hunting season. About 10,000 ducks should be using the refuge by the opening of the duck hunting season.

Goose hunting begins October 1 with a limit of four Canada geese. Duck hunting begins a week later on October 8, with the same limit as last year of four

ducks. Only three mallards, one of which can be female, one pintail of either sex, one canvasback of either sex, or two redheads of either sex are allowed.

Water conditions on the refuge will not improve until rainfall increases the flow in Myrtle Creek and more water is released from Libby Dam so that pumping from the Kootenai River is possible.

I encourage waterfowl hunters to scout areas in the Panhandle ahead of time to locate early season hotspots.

District Judge James Michaud nearly cut in half the amount a Coeur d'Alene attorney wants to charge the county.

Scott Reed, who represented the plaintiffs in the Interim Land Use Plan battle with county commissioners, had asked for

the Idaho Supreme Court is unsuccessful.

The larger figure is based on a rate of \$200 per hour, but Michaud ruled that the figure of \$125 per hour was closer to what a Coeur d'Alene attorney normally charges.

Smaller changes in the amount

Reed until the Idaho Supreme Court rules on their appeal of Michaud's decision. Commissioner Orrin Everhart said that date "probably won't be too off in the future."

See JUDGE, Page B-1

## Many similarities between fiery 1910 season and today

The year was 1910, the month was August, and from Newport, Wash., to Taft, Mont., from the Clearwater to the Canadian border, the mountains roared.

Nearly 3 million acres of Idaho and Montana forest exploded into flames on the 20th of that month, when a hundred separate fires suddenly blew together in a high wind that swept through northern Idaho.

Entire towns and villages were destroyed in the fire of 1910 — the "Big Blowup," it was called. Half

of Wallace burned, its families evacuated.

The smoke plume emanating from the region was so great that in Buffalo, N. Y., street lights had to be turned on at noon for visibility, and ships on the European side couldn't navigate through it.

Could it happen again?

"I wouldn't speculate on that," U.S. Forest Service spokeswoman Judy Smith said.

But some eerie parallels exist between 1994 and 1910, Smith said.

See 1910, Page B-1

### 1910

Continued from Page 1

To start with, both are dry years. Less than 5 percent of the time is a year as dry as 1910 or 1994.

The initial lightning bursts that started the 1910 fire occurred on July 23 that year.

The first lightning bursts that started the 80 currently active fires in the region also occurred July 23 this year.

"They had about 4,000 firefighters working in the Northwest by this time in 1910. I would say we have the same number now," she said.

The woods were ripe for a burn in 1910, same as they are now, say foresters.

"The fuel load is there," said Ken Kohli, spokesman for the Intermountain Forest Industry Association.

"We've got the dead fuel, we've got the dryness. For the last five or six years, the Forest Service

has done very little (to remove dead and dying timber). They're going to have to live with their dead timber situation out there," Kohli said.

Privately-managed timber stands are in better shape because dead and dying trees have been thinned out, he said.

In the past 19 days, 400 fires have been started in northern Idaho — all but a handful lightning-caused, Smith said.

That compares to an entire normal year's 71 lightning starts,

"and we're not yet into the peak of the fire season," she said.

"The potential for the big bust is there," she said, but regional fire crews have done a superb job of not letting small starts get out of hand.

"I'm very proud and encouraged by the success of our initial attack efforts so far," she said.

And fire crews nowadays have two things the forest protectors of 1910 didn't have: aerial fire suppression, and road access to the woods.

# Public Lands Advisory Committee Formed

by Mike Weland

Boundary County Commissioners on Monday formally approved a resolution to establish a Public Lands Advisory Committee to recommend policies related to the uses of public lands and resources in Boundary County.

Saying that the county's economic and social stability is linked to the lands and that public welfare is dependent on continued economic and social stability, the committee was tasked with reviewing public lands proposals and developing recommendations on policies related to the uses of

public lands and resources including water resources, agriculture, timber and wood products, recreation, wildlife and mineral resources.

"The public lands within Boundary County are being planned for by other agencies of government while Boundary County is responsible for conducting land use planning on privately owned lands," the resolution reads, "(and) Boundary County seeks to participate in the planning processes of all lands within Boundary County ... the commissioners desire to have an advisory committee composed of

citizens of Boundary County who will provide them with advice and recommendation for the planning and land uses and management practices on public lands."

The Public Lands Advisory Committee is broken down into seven sub-committees; the water resources, agriculture, timber and wood products, recreation, wildlife, mineral resources and economic history subcommittees, each composed of a minimum of five members and not more than nine. The chairman of each subcommittee serves as a member of the Public Lands Advisory Council, passing on their

subcommittee's recommendations and findings. Members of each committee serve at the commissioners' pleasure for a term of three or five years.

According to commissioner Orrin Everhart, finding volunteers to staff the subcommittees was easy.

"A fairly large segment of the Boundary County population knows the importance of the project being undertaken and were willing to volunteer," he said. There are currently 42 subcommittee members working to develop committee policy and di-

See "Committee" p. 12

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**CONTINUED: FROM PAGE 1**

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## Committee

rection.

Serving on the water resources subcommittee are chairman Mike Naumann, Bob Olson and David Eby. On the agriculture subcommittee, Tom Iverson is chair and members are Terry Howe, Elmer Smith, Gene Blackhurst, Mike Ripatti, Bob Neumeyer and Craig Hubbard. The wildlife committee, with no chair selected, is Roland Hall, Ken English, Adrian Wages, Tom Mackey and Wayne Wakkinen.

Serving on the timber and wood products subcommittee are chair Don Nystrom, Phil Davis, Chuck Roady, Sam Fodge, Denise Fodge, Gary Regehr and Doug Higgins. On the recreation subcommittee are chair Tim Rosco, Cal Russell, Brion Poston, Larry Engert, Wally Cossairt and Sally Shaw. The mineral resources subcommittee is Janice

Eby, chair, and Bob Raaum, Jon Adams, Bud Behrman, David Eby, Steve Tanner and Carl Dalberg, and the economic history subcommittee is chair Lon Willoughby, Myrna Johnson, Dave Walter, Helen Foust, Ina Pluid, Frances Houck and Dave Gray.

The committee chairs will meet Monday to begin discussion for the implementation of bylaws and organizational structure, and will then schedule meetings with their subcommittees.

SUNDAY  
AUGUST 14, 1994  
\$1.50  
112th YEAR, NO. 67  
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IDAHO EDITION

# SMUGGLED PLUTONIUM SEIZED IN GERMANY

WORLD, A10



## THE SPOKESMAN-REVIEW

SPRINGFIELD, WASHINGTON

# Idaho primed for disaster

## Firefighters fear worst during driest season in decades

By Rich Roesler  
Staff writer

HAUSER LAKE, Idaho — A lot has changed at Terri Hartley's home since 1991.

The aluminum and wood roof is now steel. A furnace filter stops chimney cinders. A large water pump keeps the lawn lush.

Even so, Hartley winces at every lightning storm and smoke plume.

Three years ago, she stood on her front lawn and watched the hillside burst into a churning mass of flame. As trees exploded, she and her neighbors fled for their lives.

"It devastated me," she said. "I'll never forget it, running through the dust and smoke."

Now, firefighters throughout North Idaho are casting the same worried glances at the hills. So far,

### Inside

☑ Ready for war: Fire crews camp out at St. Maries High School. Page A18

☑ Staying safe: Officials offer suggestions on warding off wildfires. Page A18

1994 is the driest summer since record-keeping began 95 years ago.

Normal rainfall for the past six weeks is about 1.8 inches, according to Coeur d'Alene climatologist Cliff Harris. The Coeur d'Alene area has received two-tenths of an inch.

"Since the third week in June, it's never been drier," said Harris.

"We have had all the ingredients for an explosive season — the only thing we're missing is wind,"

said Mike Johnson, a fire weather meteorologist in Boise. "There is a good likelihood that we'll see wind in October."

The main concern for firefighters is the "urban interface" — where residences are built in "wild" areas prone to fires.

"They want to live out in the trees, but they don't take any precautions. Then they cuss us when their house burns down," said Larry Boatwright, fire inspector with the Post Falls Fire Protection District.

"It used to be that if there was a wildfire, we'd just go put it out," said Steven Douglas, an Idaho Department of Lands fire warden. "It's not that simple anymore."



Terri Hartley sits in her home, which is landscaped to protect the house from fire.

Please see FIRES: A18

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Weather	p. 12

8/15/95

Larry Napier  
HDR 60 Box 263  
Bonners Ferry ID 83805

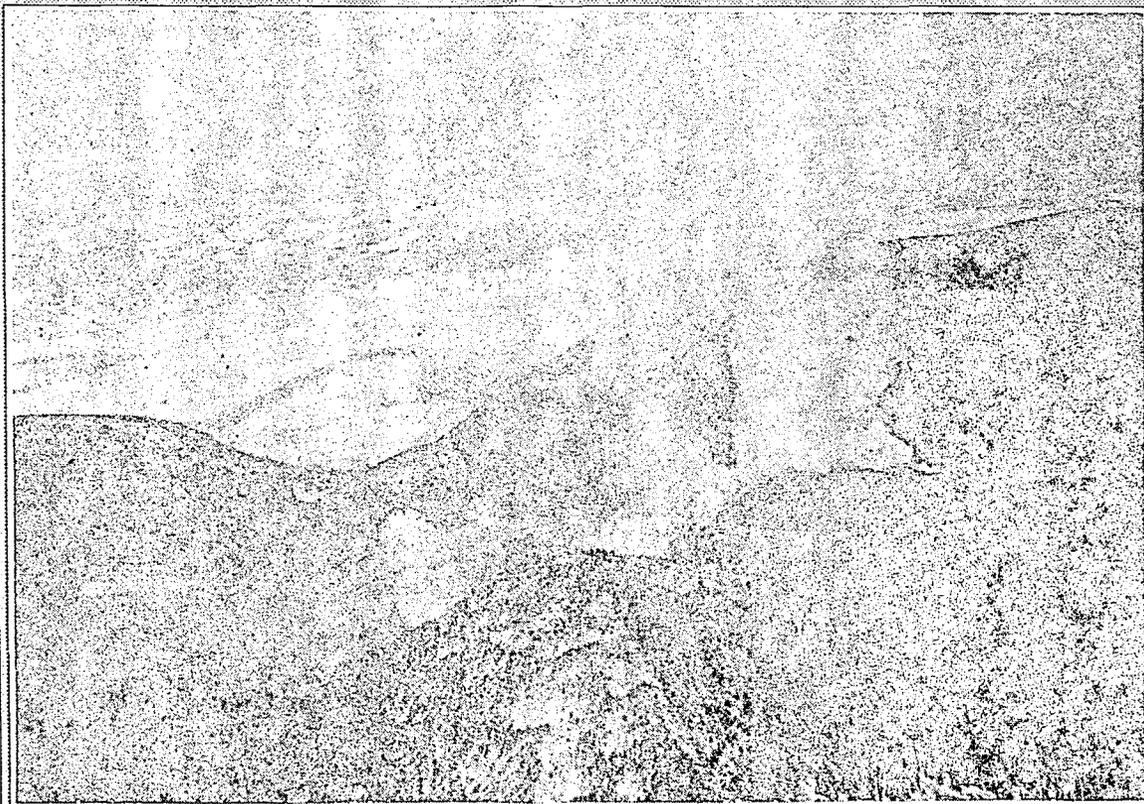
# KOOTENAI VALLEY TIMES

Volume 6 Number 15

Bonnors Ferry, Idaho. Thursday, August 18, 1994

Forty Cents

## Monday worst fire day in history



At about 3:30 p.m. Monday, the fire on Fisher Peak, which threatens critical caribou habitat and has burned a unit of the Fisher Trout timber stand, spread from a spot fire to nearly 100 acres. The fire, which remained unmanne... Wednesday due to lack of res... remained stable on Tuesday, growing to slightly over 100 acres, but an overflig... Wednesday morning revealed that the danger of sudden take off was a strong possibility. The Kootenai Valley Times would like to thank Don Jordan for making this aerial photograph possible.

### People asked to voluntarily stay out of forests to reduce risk

by Mike Weland

In an average year, 12 forest fires are reported in Boundary County's Panhandle National Forest. On Monday alone, in the wake of a weekend lightning storm, the district had to contend with 14 new fires, making it the worst fire day in Boundary County in the 95 years since records have been kept.

On Tuesday, two new fires were reported.

And Monday's dubious record adds to an already record breaking fire season in the northwest.

District wide, firefighters have responded to 480 fires this season as of Sunday. The district wide average is 120. And while Boundary County has been fortunate so far, with few fires growing beyond the spot fire stage thanks to rapid response, the area is virtually surrounded on all sides by significant fires. In the Kootenai National Forest in Lincoln County, Montana, 279 new fires have been recorded this week. Only 100 of them were manned by Wednesday.

"To put it into a bit of perspective," District Ranger Debbie Norton said, "the 1910 fire season, previously the worst recorded, started August 24. This year, the season started July 23 and has remained steady ever since. There is no

relief in sight, either in a break in conditions or the availability of crews and equipment. All we can really do is pray for rain, and ask everyone else to."

Hot weather and dry conditions have turned northwest forests into tinderboxes. Measuring by "1,000 hour fu- See "Fires" p. 3

### DOL approves field burning

The Idaho Department of Lands reached an agreement calling for tighter than normal restrictions to allow area farmers to begin field burning this week.

Representatives of the local agricultural smoke management advisory committee met recently with Scott Bacon, Forest Warden for the Kootenai Valley Fire Protective District, and agreed to operate under a set of restrictions exceeding normal permit requirements. The Department of Lands had suspended fire permits in mid-July due to the severity of this year's fire season.

Due to the economic impact of a complete burning... agricultural- See "Burning" p. 11

# Refuge powerlines could be buried

By JAMIE KELLY  
Staff writer

A plan the city council approved to get rid of the power lines near the Kootenai Wildlife Refuge and replace them with an underground cable would be safer for wildlife and humans, councilmen said.

If signed by drainage District 11 commissioners, the plan, with an estimated cost of around \$100,000, would replace two and one-half miles of power lines with an underground cable powered by Northern Lights. The cable will power the pumps to irrigate the refuge and drain water from farmland in the

drainage district.

Larry Napier of the U.S. Fish and Wildlife said the lines pose a danger to wildlife and noted that a bald eagle has been killed by them. He said he also feared a broken line could lead to a fire on a nearby farm and would be an obvious safety hazard to pedestrians.

Councilman Darrel Kerby said the cost of the project is worth its benefits. "What's the cost of saving a bald eagle?" he said. He further noted that it will save money in the long term because the cost of

See REFUGE, Page B-1

## Refuge

Continued from Page 1

continual repairs of the overhead lines is high.

The city agreed to pay for the removal of the existing lines and the purchase and installation of two converters for the refuge and the district.

If the measure passes, the district will pay for the cable and will employ a contractor for repairs.

Councilmen expressed concern at the meeting that the city would assume the costs of fixing the converters and of possible future warranty issues, but a revised version of the plan will grant ownership of the converters to the district.

In addition, the district, currently on city power, would have to agree to be served by Northern Lights, which has a lower rate for water drainage than the city.

If approved, construction should begin sometime next summer and will be completed in about a month's time, said Kerby.

KOOTENAI VALLEY TIMES

July 28, 1994

## Overheads out at refuge

by Mike Weland

A long-held goal of Kootenai Wildlife Refuge managers to have overhead powerlines on the refuge removed and placed underground took a big step ahead

Tuesday when the Bonners Ferry City Council, in a special meeting, approved, in principal, abandoning its lines to Northern Lights.

The need to have the lines moved underground has long been felt at the refuge. According to refuge manager Larry Napier, who addressed the City Council at their regular meeting last Tuesday, the overhead lines have caused the deaths of numerous birds over the years, killing great blue herons and at least one bald eagle by strikes and ospreys and owls by electrocution at poles.

Another problem with the lines is power line breakage, which has killed at least one coyote and started at least five documented wildfires.

Through the agreement, the City of Bonners Ferry will abandon the power poles, turning those lines over to Northern Lights. The U.S. Fish and Wildlife Service, the City of Bonners Ferry and Northern Lights will share the costs of burying a single-phase powerline from the mouth of Deep Creek to the District 11 pumping station and to install required electrical three-phase converters.

According to Bonners Ferry Mayor Harold Sims, the city on Tuesday agreed in principal to abandon the lines, with details of the joint project to be worked out by each of the involved parties, including the Drainage District 11 board