

CONBOY NATIONAL WILDLIFE REFUGE

Glenwood, Washington

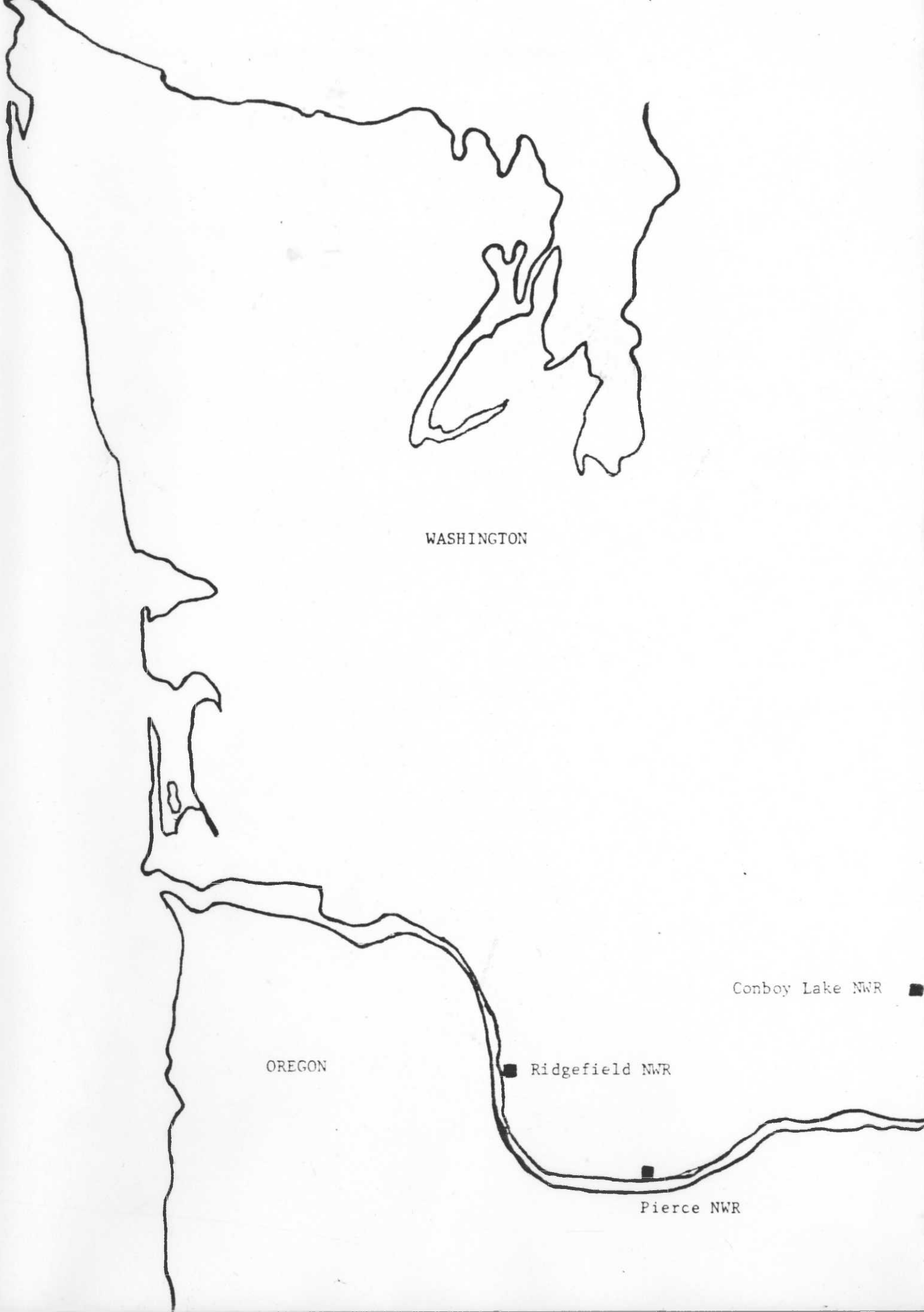
ANNUAL NARRATIVE REPORT

Calendar Year 1986

U.S. Department of the Interior

Fish and Wildlife Service

NATIONAL WILDLIFE REFUGE SYSTEM



WASHINGTON

OREGON

Ridgefield NWR

Pierce NWR

Conboy Lake NWR

CONBOY LAKE NATIONAL WILDLIFE REFUGE

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REVIEW AND APPROVALS

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Hawold E Cole 4/6/87 Bruce Wiseman 4/6/87
Refuge Manager Date Refuge Supervisor Review Date

Stephen R Wilson 5/8/87
Regional Office Approval Date

INTRODUCTION

Conboy Lake National Wildlife Refuge is located in the northwest corner of Klickitat County, Washington. Headquarters is located eight miles southwest of the small ranching and logging community of Glenwood.

The Glenwood valley, formerly known as Camas Prairie, lies on the eastern slope of the Cascade mountains at approximately 1,800 feet elevation. High ridges that surround the valley, and 12,286 foot Mount Adams, 17 miles north of headquarters, give an illusion of much greater elevation. The refuge includes much of the lakebed of historic Conboy Lake which occupies the southern portion of the valley. The lake was drained in the early 1900s in an attempt to increase farmable land.

The refuge was established in 1964 primarily for migratory waterfowl. Excellent habitat diversity provides for a wide variety of resident wildlife species. The refuge occupies 5,500 acres of lakebed and surrounding uplands. The original proposal to the Migratory Bird Conservation Commission was for over 10,000 acres (later reduced by 1,000 acres by administrative decisions). Acquisition history has been stormy, with some land being condemned and later revested due to political pressure. Current ownership is a broken pattern and habitat restoration plans remain on hold pending future consolidation or acquisition.

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K. FEEDBACK

A. HIGHLIGHTS

Greater sandhill cranes again produced young on the refuge this year. This is the only known nesting pair in the State of Washington. (Section G.4.)

Conboy completed its first year as a satellite of Ridgefield NWR. (Section E.2., 5.)

The Whitcomb Cabin (National Register Site) draws FWS and public attention. (Section F.12.)

A two person Washington Conservation Corps (WCC) crew worked a six month tour. (Section E.2.)

Washington State University began a knapweed control study. (Section F.10.)

Refuge has its first booth at the Klickitat County Fair. (Section H.7.)

B. CLIMATIC CONDITIONS

TABLE I
CLIMATOLOGICAL DATA - 1986

MONTH	HIGH	LOW	PRECIPITATION	SNOW
JANUARY	46	07	9.18	31.5"
FEBRUARY	59	06	7.3	18.0"
MARCH	67	19	1.83	0
APRIL	80	16	0.53	T
MAY	97	18	0.1	0
JUNE	97	30	0.1	0
JULY	88	28	0.1	0
AUGUST	94	33	0.15	0
SEPTEMBER	81	19	1.6	0
OCTOBER	81	19	1.6	0
NOVEMBER	57	15	4.51	T
DECEMBER	48	2	3.81	18.5"

TOTALS	--	--	30.81	68. "
EXTREMES	97	2	---	---

Table I shows weather conditions for 1986. This information is courtesy of Mr. and Mrs. George Hathaway, official weather service observers at Glenwood.

Precipitation was near normal; 30.8" compared to annual average of 34".

The year began with ice covering all water bodies. (January had only three days of low temperatures above 32 degrees.) This continued until late February when temperatures began to moderate and water levels rose and ice receded. This cold weather forced birds to seek warmer climes and census figures were low for the period. For example, only 525 tundra swans were counted compared to nearly 1,000 the previous year. Water levels peaked at about 1,817' providing ample water for migrants. June rains helped keep some water available for broods. Fall rains and irrigation water provided some water for the start of waterfowl season. Freezeup in early November generally held into January 1987.

C. LAND ACQUISITION

1. Fee Title

No action was taken to purchase additional land this year. An environmental assessment (EA) prepared over a year ago is being reviewed and rewritten - thus no action toward acquisition has occurred.

Short term goals identified in the EA proposed land exchanges to consolidate FWS ownership. If successful, one and possibly two areas would be of sufficient size to begin intensive habitat management programs.

The long range goal still will be to acquire the lands within the MBCC approved boundary. Such acquisition will be on a willing seller only basis, and it will be many years before acquisition is complete.

No action was taken this year on an offer by Mrs. Grace Avery to donate part ownership of a 320 acre inholding to the refuge. The FWS (Realty) is reluctant to accept part of an undivided ownership. Mrs. Avery owns approximately 2/3 of 1/2 or 105 acres. We will continue to work on the matter.

The Lakeside school inholding (Tract 45) was sold to another private party this year. R.O. Realty was notified when it came on the market but it was purchased by a Mr. Claude Boyatt from the Ridgefield area. This one acre tract and house is totally surrounded by refuge lands and sold for approximately \$20,000. Its past absentee owners rarely used it and therefore impacts on the refuge were minimal. It is hoped we will be fortunate with the new owner.

D. PLANNING

4. Compliance with Environmental Mandates

Routine maintenance was performed on the Whitcomb Cabin, our National Register of Historic Places site. More information about the cabin can be found in Section F.12.

E. ADMINISTRATION

1. Personnel

Current staff consists of Refuge Manager Harold E. Cole, Jr., GS 9/5, PFT.

Assistance was provided by Ridgefield staff, particularly Manager Bruce Wiseman and District ORP Susan Saul. Office personnel Joan Goodson, Sally Ward and Biologist Marguerite

Ross Hills were able to visit Conboy during the year. Joan and Sally provide the administrative assistance required on a day to day basis.

2. Youth Programs

This was the ninth year of YCC at Conboy Lake. The seven person crew worked on fence repair and construction, trail and grounds maintenance and many other odd jobs.

This program continues to be popular with local youth, their parents and community members. The distance to other potential work sites makes jobs for high school aged youths particularly hard to find.

Crew Leader Dick Christensen (in his ninth year with Conboy Lake YCC) keeps the enrollees working and out of mischief (well, almost). Without this program, a good work leader and the high quality of young people, many, many jobs simply would not be accomplished.

The crew worked very well this past year. Its small size simplified work assignments and transportation as well as making field trips and environmental education easier and more effective.

The refuge also participated in the Washington Conservation Corp (WCC) program. Two crew members, Suzanne Tyndall and Jo Ellen Lively, were hired in early July for a six month program. The program was funded by the Washington State Department of Ecology to provide jobs and training to youths 18-25 years old. The refuge provided training and supplies, the rest was handled by the State. Both did a good job and we hope to participate again if the program is funded by the state legislature. Glen Crandall, State Department of Ecology WCC program director, visited the refuge for a day. He seemed favorably impressed with the area and the work 'his' crew had been doing.



#1-Conboy NWR Staff. Front row L to R, WCCer's Suzanne Tyndall, Jo Ellen Lively. Kneeling YCCer's Carren Bean, Sharon Peppers, Tammy Sykes. Third row, YCCer's John Cooper, Craig Smith, Darren Jones, Dave Lively. Back row Refuge Manager Cole and YCC Leader Richard Christensen. 85-HEC

4. Volunteer Programs

Linda Cole provides volunteer assistance whenever needed. This includes answering the phone, monitoring the radio, moving vehicles and equipment, running errands, etc., etc., etc. Heather Cole (age 12) and Jon Cole (age 10) are also officially volunteers. As with Linda, they provide many hours of time helping provide an 'extra hand' when needed. Together the three have provided several hundred hours of assistance this year.

Lack of local housing and distance to larger communities has hampered development of a larger volunteer program.

5. Funding

Funding is included in the Ridgefield NWR budget. This year completed the transition from the breakup of the Lower Columbia River Refuge Complex and FY 87 will mark the total budget separation from former complex stations. The manager at Conboy assists with all planning and budgeting, especially for this station.

6. Safety

There were no lost time or reportable accidents on the station this year. The SAFETY Plan was reviewed during the year.

SAFETY is discussed at each staff meeting and always of prime concern when working. YCC received a complete SAFETY orientation on their first work day and daily sessions with each new tool or job. They also attended an eight hour Red Cross First Aid class.

An aviation pre-accident plan and map is available to provide information to FWS contract pilots and observers flying census or recon on or near the refuge. All the necessary flight gear (helmet, nomex, gloves, etc.) is available now for anyone flying below 500 feet.

Refuge Manager Cole and his wife are both certified Emergency Medical Technicians (EMT) and certified CPR instructors. At a station that is 35 miles from the closest medical facility such advanced first aid skills could come in quite handy for staff and visitors alike.

Manager Cole is also a Washington State Firearms Safety Instructor and assists with annual hunter educational training for local hunting youngsters.

Cole is also a member of the Regional Office SAFETY Committee.

F. HABITAT MANAGEMENT

1. General

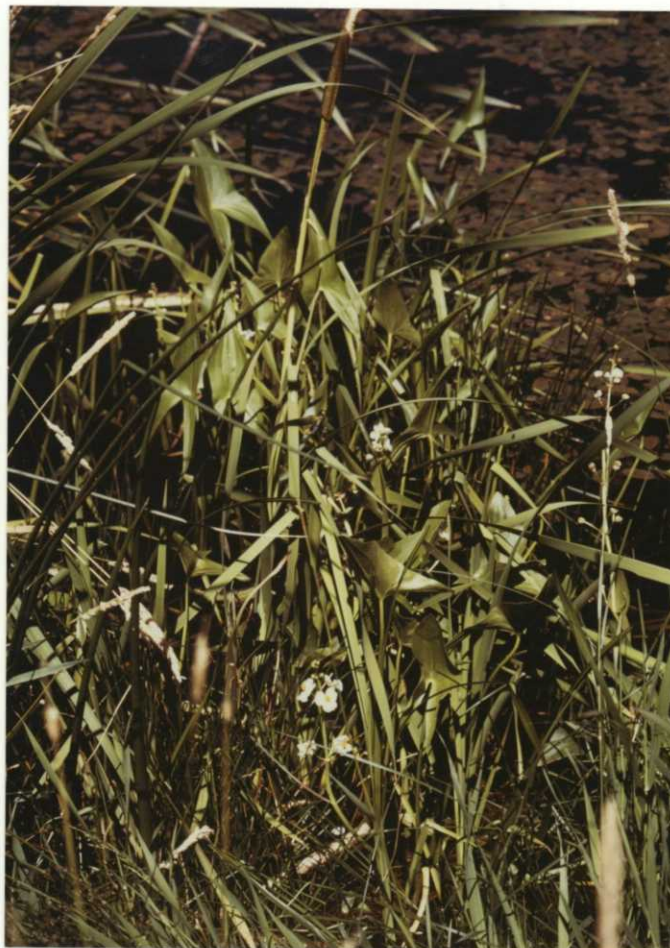
Habitat on the eastern portion of the refuge continues to improve following repairs to dikes along Camas Ditch over the last few years. The ability to hold water late into the summer (year round in limited areas) has allowed the vegetation to begin to return to natural species. Canarygrass is being replaced by aquatics. The same is happening behind the Willard Pond dike (the area where the sandhills nested in 1984).

2. Wetlands

Wetland areas that have been re-created during recent water control work provide permanent or semi-permanent wetland habitat for nesting waterfowl. The eastern portion of the refuge provides the best example of this improvement. The north bank of Camas Ditch forms a low dike that holds water in that portion of the old lakebed that we own. The level is not as high as we would like but is an improvement over the total lack of development that drew criticism from past GAO audits and refuge critics. Standing water was available throughout the summer.



#2- Permanent water is beginning to flood out canarygrass on several areas of the refuge. 86-HEC



#3-Arrowleaf, cattail, sedges, rushes
and other aquatics have replaced
canarygrass in ponds along the
north bank of Camas ditch in
the eastern end of the refuge.
86-HEC

3. Forests

Thinning or complete removal of pine reproduction that has been invading portions of the lakebed continued by YCC this year. Most of the small trees are lodgepole pine with a few ponderosa pine on the drier areas. Approximately 40 acres were reopened this year and the project will continue with YCC help in the future.



#4-Break time - YCCer's with part of a days tree removal. L-R Jones, Cooper, Peppers, Sykes, Lively, Smith, Bean. 86-HEC

Greg Loving and Elliot Black (R.O. Realty) spent a week at the refuge cruising timber for re-evaluation of Revenue Sharing appraisal. This should provide the refuge with its first up to date analysis of the species composition and volume of timber on the area. Greg spent another week updating land values, also for Revenue Sharing.

5. Grasslands

Upland grasslands have not been grazed since 1976.

7. Grazing

No action was taken to implement a proposal by Soil Conservation Service (SCS) and the local soil conservation district to re-introduce grazing as a management tool on the refuge. The canarygrass meadows typically have 6-12" of regrowth following haying. This regrowth is too tall to be used by geese in the fall or following spring. Livestock could be used to reduce the regrowth to 4"-6" where it would provide short, succulent forage for fall and spring use by migrant geese. The SCS proposal calls for a four year trial using varying grazing prescriptions combined with haying to determine the proper rate of use to achieve habitat goals. Discussion is continuing on the matter.

8. Haying

All designated haying units were cut this year. Upland portions of Unit 3-A that had been uncut for many years were cut last year by an existing permittee. The area is primarily wild hay with some tame hay still remaining (trefoil and timothy). It is high enough to be irrigated (old ditches still are available) and with renewed haying should make excellent goose browse. Some increased goose use was noted even though no quantitative data was gathered. The increase may be more apparent in future years as the residual matted layer is replaced with succulent new growth.

Eleven permittees cut approximately 1,400 tons of hay on approximately 1,400 acres of lakebed. Yield this year was very close to 1.0 ton per acre. Hay goes for \$5/ton, thus nearly \$7,000 in receipts came from this program.

9. Fire Management

There were no wild fires or prescribed burns on the refuge this year. An agreement with the Washington Department of Natural Resources provides fire protection for refuge lands at a cost of \$3,691 (.67/acre). Klickitat Fire District #8 provides building protection; however, their station is eight miles away and it is a volunteer district. A plan to install a basic fire suppression facility in conjunction with a new domestic water system at refuge HQ for building protection was not completed in 1986. It will be done in 1987.

The refuge slip-on fire pumper was regularly serviced and tested and the fire cache was inventoried and updated.

Cole attended a week-long S-390 Fire Behavior course at Redmond, Oregon, put on by the U.S. Forest Service. It was a worthwhile session and should prove beneficial for wildfires or prescribed burning.

10. Pest Control

Knapweed continues to be the pest species of most concern on this refuge. Over the past several years we have tried various methods of control, especially biological control. Seedhead gall forming flies and root boring beetles have been released and are surviving.

Meadow knapweed (Centaurea pratensis) is the most widespread (80 acres estimated) but of least concern to county and state weed control folks. Diffuse knapweed (C. diffusa) is very sparsely represented (less than 100 plants) and hopefully can be eradicated using chemical and mechanical methods.

On about half of the infested area, meadow knapweed is found side by side with long-bearded sego lily (Cabchortus longebarbatus var. longebarbatus), a state endangered species and candidate species for federal listing.

In order to obtain the best possible control of knapweed with the least impact on native species, a cooperative study between FWS, Washington State University Coop Extension and the Klickitat County Weed Board was initiated. Dr. Ben Roche, his Assistant Cindy Talbot, and Bob Gorman, County Weed Supervisor, spent several days setting up a test grid to evaluate the relative effectiveness of present available technology to control meadow knapweed on the refuge.

The following treatments were applied:

Clopyralid-2oz. and 4oz./acre with and without N fertilizer (Dalco 290)

Dicamba-4oz. and 8oz./acre with and without N fertilizer (Banvil Herbicide)

Curtail 205-1qt. and 2 qt./acre with and without N fertilizer

Weedmaster-1qt. and 2qt./acre with and without N fertilizer

2,4-D (Amine)- 8oz. and 16oz./acre with and without N fertilizer

Nitrogen fertilizer at 40 lb./acre

Control - no application of either herbicide or fertilizer

Eighty-eight blocks (64 sq. ft./block) in 22 plots made up the grid. The vegetation will be analysed initially and periodically over 2 to 10 years, based on response (and interest) for changes in species composition, relative weediness and desirable forage production. Fertilizer may be applied annually to enhance vigor of desirable species.

In conjunction with this study the refuge agreed to keep a 50 foot strip adjacent to the Agnes Miller property as free of knapweed as possible. Knapweed is present on the Miller property (overgrazed), however, to be 'neighborly' we agreed to maintain the strip. The YCC crew applied Roundup to individual plants with what appeared to be excellent success.

Dr. Peter Harris, Research Scientist for Canada Agriculture Department in Regina, Saskatchewan, wrote to us asking if we had noticed any rust on refuge knapweed. He is interested in using it as a bio-control agent but is stopped by fear of introducing a new disease to the U.S. If it could be found occurring naturally (he has found it in British Columbia) the problem might be solved. We were unable to locate any rust but will continue to monitor for it.

For the second year, Bachelor's button (C. cyanus) was mechanically removed by YCC enrollees on approximately ten acres just east of the main knapweed infestation. This species is an annual and may respond to hand removal prior to seed dispersal. Time will tell.

No action was taken on a suggestion by C.D. Littlefield, noted Malheur sandhill crane biologist, that coyote and raven control be considered to enhance potential for sandhill crane survival.

11. Water Rights

A 1977 water rights court action between the Yakima Indian Nation and non-native landowners and water users was returned to District Court from the Ninth Circuit Court. The District Court reaffirmed its original decision invalidating the tribal attempt to control water rights via a water code. This may still be appealed.

12. Wilderness and Special Areas

The Whitcomb Cabin, a National Register of Historic Places site, received considerable attention in 1986. Based on a 1985 report from Mr. Al Staehli, a historic architect, we determined the cabin was in fact a significant building, representative of permanent log house construction technology brought to the area by pioneers of German heritage. The national register nomination form for the building was updated with the additional information and expanded statement of significance provided by Staehli.

While we considered various management options for the deteriorating building, a contact with Mr. Homer Townsend of the Klickitat County Centennial Committee started a ball rolling that still hasn't stopped. Mr. Townsend informed Mr. Bob Blumenstein, president of the new Gorge Heritage Museum in White Salmon, of Staehli's report on the cabin. Bob took immediate interest in the building and formed a committee to

work with the refuge to preserve and protect it as a Washington State Centennial project for Klickitat County.

Numerous meetings took place regarding the cabin through the year. Mr. Steve Mathison, Washington State Historic Preservation Office (SHPO) visited the site on April 28. Managers Cole, Wiseman and District ORP Susan Saul met with interested local citizens and groups in informal discussions of management options. The museum's Whitcomb Cabin Committee met several times, including an on site tour on September 7.

Mr. Al Staehli and Mr. Gregg Olson, a log cabin restoration professional, were hired to complete an analysis of the cabin and determine its condition. This information was necessary for our decision making process. They determined that 80-90% of the logs could be saved - the building was in better shape than its appearance suggested. Al and Gregg also developed working drawings of the building and outlined specifications for moving and/or rehabilitating it.

Rumors began to spread in this small community about the fate of the cabin. Some older residents, descendants of area pioneers, expressed concern about the idea of moving the cabin from its original location, while museum committee members vigorously promoted the idea since they believed the building would be less susceptible to vandalism and fire and more accessible to tourists if located at refuge HQ. A public meeting was held in Glenwood early in 1987 to share information and record public concerns and comments. After a thorough briefing most local folks wanted the cabin restored. The question of whether to do it on site or move it to the refuge HQ is still to be decided. The meeting was well attended, well accepted and definitely positive - in contrast to past meetings in Glenwood regarding condemnation, etc. Agnes Miller (a strong, vocal refuge opponent and condemnee) commented that it was "a good meeting." Mr. Jerry Lorenz, one of the Gorge Heritage Museum cabin committee members and also a county tourism board member announced that \$5,000 would be made available for the project if "in-kind" matching labor/money could be obtained.



#5-Members of the Gorge Heritage Museum's, Whitcomb Cabin Committee enjoy a summer picnic at the cabin site to discuss its future. L-R Jerry Lorenz, Gary Lawson, Darvel Lloyd, Don Warner, Greg Meyer (foreground), Bob Blumenstein (rear), and district Outdoor Recreation Planner Susan Saul. 86-HEC



#6-Members of Gorge Heritage Museum Whitcomb Cabin Committee examine the interior of Whitcomb Cabin. L-R Gary Lawson, Darvel Lloyd, Greg Meyer. 86-HEC

G. WILDLIFE

1. Wildlife Diversity

The current variety of refuge habitat, from permanent water to uplands to forest, provides ideal, natural diversity.

2. Endangered and/or Threatened Species

Bald eagle use normally coincides with waterfowl concentrations. This is usually late October until early June. An occasional eagle may pass through the refuge at any time of the year.

Three plant species, long-bearded sego lily, Oregon coyote thistle and Ames milk vetch, occur on refuge lands. All are listed on the Washington endangered or sensitive species list and each species is listed with a site on the Washington Registry of Natural Areas. This year Laura Smith (WA. Chapter of The Nature Conservancy, a cooperator on the registry) visited the refuge and each register site.

Mr. Brian Ness, a graduate student in botany from Washington State University was granted a permit to collect several long-bearded sego lilies to assist in his genetic study of the species. Washington Natural Heritage Program Botanist Reid Schuller suggested approval of the permit.

Greater sandhill cranes, which are on the Washington endangered species list, nest on the refuge. This continues to be the only known nesting pair in the state.

3. Waterfowl

Peak tundra swan numbers were down to 525 from a record high of 917 last year. This compared to 396 in February 1984 and 700 in 1983.

Manpower constraints prevent detailed surveys but general observations pointed to lower numbers of ducklings produced.

Four goose nests were located. One was in the fenced pond area at HQ (used annually for at least ten years), one each on two artificial nesting islands near the Willard Pond dike, and one adjacent to the Lake Road in the central portion of the refuge. All nests successfully hatched but brood survival is unknown.

4. Marsh and Water Birds

Greater sandhill cranes continue to return to Conboy NWR in the spring; four birds were seen in April. In spite of several efforts to locate nests, none could be found. One pair raised two young to flight stage in 1984 and one in 1985 respectively. These were the first known young produced in

Washington state since at least 1941 and likely the first of this century. In August, five sandhills, including one young were located on the refuge. The young could fly when first observed so it is impossible to say that it hatched and was reared on the refuge, but it seems likely. Unconfirmed reports have come in about cranes on the Yakima Indian Reservation just north of Glenwood.

No attempts have been made to band either the adults or young birds. With the small breeding population we are reluctant to 'harass' them. Hopefully habitat will continue to improve, and the birds will continue to return to the area.

5. Shorebirds, Gulls, Terns and Allied Species

Common species of this group include killdeer, common snipe, lesser yellowleg and black tern.

6. Raptors

Raptors common to the refuge include red-tailed hawk, American kestrel and great-horned owl. Less common are Cooper's hawk, goshawk, rough-legged hawk, short-eared owl, screech owl, and saw whet owl. Late in the year, an albino buteo resided in the area near Glenwood.

We again assisted with the mid-winter bald eagle census.

7. Other Migratory Birds

Mourning dove use upland portions of the refuge for nesting and move into hayed canarygrass fields in late summer. Band-tailed pigeon frequent the area to feed on ripe elderberries.

8. Game Mammals

Black-tailed deer used timbered portions of the refuge for cover and fed in meadows. Numbers vary from 10-25. No black bear were seen on the refuge this year.

Elk continue to use the area. They spend much of the summer in timber interspersed with meadowland in the south central portion of the refuge. They move onto privately owned timbered ridges and hay meadows as the mood strikes them. The population varied from 15 to 30 animals. Washington Department of Game (WDG) biologists don't want a large population of elk in the county for fear of competition with deer on the winter range and possible damage to orchards in the southern parts of the county. The Glenwood area is open to either-sex hunting and the elk are eagerly pursued, especially when there is snow on the ground.

Several elk from the local herd were taken during the 1986 season. Most however, dispersed east and south and generally avoided hunters. Some snow was present during most of the

season but no large accumulations occurred (last year's heavy snow drove Mount Adams' elk to low elevations and increased the take).

10. Other Resident Wildlife

Coyote and beaver are common residents. Coyote numbers increased somewhat based on day to day sightings and night-time howling checks. River otter are occasionally seen, especially during winter months when there are limited open water areas.

Many other small mammals, over 140 bird species and numerous reptiles and amphibians, reside on the refuge.

11. Fisheries Resources

Brook and rainbow trout and bullhead catfish are present in refuge waters. A small public fishing area is available at the east end of the refuge.

15. Animal Control

Most responsibilities in this area have been transferred to the Department of Agriculture.

There were no depredation complaints from local ranchers. Some have several hundred geese (or thousands depending on who does the counting) at one time.

Refuge Manager Cole and volunteers spent one day at Columbia White-tailed Deer Refuge assisting in trapping and moving deer.

H. PUBLIC USE

1. General

Refuge signs that received notoriety last year remain in storage following their removal from the county road right-of-way in Glenwood. The signs drew fire from one County Commissioner, Chairman Fred Holly. Rather than push the issue, we took the signs down. Manager Cole has heard many positive comments about the signs and many negative comments about the way the commissioners handled the matter (including an editorial in the local newspaper and one letter to the editor). It still is hard to fight 'city hall'.

2. Outdoor Classrooms - Students

The refuge hosts several field trips each year for area schools. Glenwood and White Salmon, Washington and Hood River, Oregon sent classes this year. Each group is given a short guided tour on the Willard Springs Trail and a brief discussion about wildlife and refuges.

3. Outdoor Classrooms - Teachers

Teachers are encouraged to visit the refuge before bringing their classes. No formal teacher educational program is used - a quick tour and briefing suffice. Most teachers have been here many times and know what they want to do. Several local teachers have been through the Project Wild training and hope to begin using the program here.

4. Interpretive Foot Trails

The Willard Springs foot trail provides refuge visitors an opportunity to view habitat representative of the whole valley. It offers views of the valley floor and Mount Adams. An observation deck built by YCC in 1983 is now one of the highlights of the trail.

5. Interpretive Tour Routes

County roads around the valley and across the lakebed provide good vehicle access for viewing wildlife and scenery on the refuge. A parking lot on the Glenwood-BZ Corners road provides access and information for visitors.

7. Other Interpretive Programs

Manager Cole gave several talks to local school classes on various wildlife topics. The movie, Wildlife, Wetlands and You - The Duck Stamp Story, is always popular. Slides of the refuge were presented at a meeting of the Mount Adams Chamber of Commerce held in Glenwood.

Manager Cole presented a Wildlife Week program to the Glenwood first and second graders. The students looked at various invertebrates and discussed other 'wildlife in the world'.

For the first time, the refuge had a display booth at the Klickitat County fair in Goldendale. Using a combination of System 70 exhibit and materials put together by Ridgefield and Conboy staff (especially WCC), an attractive and informative exhibit was presented. The booth was staffed during all open hours by WCCer's Tyndall and Lively and Manager Cole. Many favorable comments were received.



#7-Klickitat County Fair Booth. WCC and refuge staff were present to answer questions. Jo Ellen Lively and husband Dan (also a past YCC and CETA employee of the refuge) are pictured here. 86-HEC

8. Hunting

For the third year in a row, waterfowl hunting was severely limited by weather. Late season of '84-'85 did not have a 'thaw' and the season ended with few birds taken. The beginning of the '85-'86 season was dry with little standing water for early migrants. A few ducks and several limits of geese were taken. Freeze up occurred in early November and ice and deep snow stayed through the end of the season. The same occurred for '86-'87.

No attempt is made to record exact data on hunters or birds taken. Spot checks are made when time allows. The refuge has a 2,235 acre area open to hunting. This is a free-roaming hunt. Few hunters pursue dove, ruffed grouse, quail or deer on the public hunting area.

Manager Cole conducted a steel shot seminar for local waterfowl hunters and interested public at the Glenwood school. Nearly fifty people watched the Lead Poisoning in Waterfowl video and the Duck Stamp movie. Several mounted geese were borrowed from Oregon Department of Fish & Wildlife to assist in sub-species identification. The program was well received and many attendees expressed a desire to have more informational meetings like it in the future.

9. Fishing

One quarter mile of Camas Ditch outlet creek is open to fishing for trout and bullheads.

11. Wildlife Observation

Wildlife observation is best from February until May when waterfowl concentrations are present and vegetation is short enough to see them. Most of the refuge is visible from adjacent county roads.

12. Other Wildlife Oriented Recreation

The scenic beauty of the Glenwood Valley attracts many photographers. Fall colors are brilliant and Mount Adams provides a fantastic backdrop.

13. Camping

Camping is prohibited on the refuge. Department of Natural Resources provides several campgrounds within a few miles of the refuge.

15. Off-Road Vehicling

ORV's are prohibited.

16. Other Non-Wildlife Oriented Recreation

Such use is discouraged. Requests to ice skate and canoe the lake or canals head the list. Such activities have been prohibited for many years and there are no plans to open the area for these activities.

17. Law Enforcement

Waterfowl enforcement was minimal due to shortage of water in the earliest part of the season and freeze up by early December.

Manager Cole provided assistance to Special Agents Bartee and Kislner and Umatilla NWR during opening weekend of the Oregon waterfowl season. Emphasis was on new steel shot regulations on the Umatilla portion of the Columbia River. Several citations were written and many lead shot shells seized.

Charges were filed in August 1986 against four individuals for a 1984 elk poaching incident on the refuge (taking in closed area at night). Many hours of investigation, many dollars in crime lab time, and several search warrants have gone into this case so far. The U.S. Attorney expects a trial in the spring of 1987. The delay has given the gentlemen in question a chance to get involved in other things; one faces up to 40 counts in a state and federal bear case, another for illegally buying pelts.

One state citation was written for a loaded gun in a vehicle. The gentleman requested and was granted a jury trial. He claimed that he did not have a loaded gun and challenged officer Cole to "look me in the eye and tell me I did." The jury found him guilty and he received a \$250 fine and five days suspended. Bail would have been \$89 if he would have forfeited.

Manager Cole assisted the Department of Fisheries and Department of Ecology in an investigation of dumping liquid manure from a dairy in the town of Trout Lake into the White Salmon River. Water samples were collected and photos taken but Ecology didn't follow up because they had already given the person 30 days to 'clean up' his act. During the investigation it was discovered the farmer had been dumping dead livestock on the riverbank. A Klickitat County Sheriff's deputy served a search warrant and, under threat of legal action, over 20 cows were pulled up onto level ground and buried.

Refuge Manager Cole attended 40 hrs. L.E. refresher training in Sacramento, CA. Firearms qualification was provided at Sacramento, CA. and at Fort Vancouver, WA. by SA Jerry Woods from Portland L.E. office.

I. EQUIPMENT AND FACILITIES

2. Rehabilitation

The south bank of Camas ditch in haying unit 3-D was rehabilitated and a three foot CMP water control structure installed. Ray Hathaway, the permittee on the unit, donated part of his D-6 cat time to the project. WCC enrollees gained experience on a hydraulic operated dozer (the refuge dozer is a cable blade). Adjoining neighbor Harry Miller also assisted with cat operation and installing a culvert and rehabilitating the ditch bank on his property. This work should allow the refuge to hold a modest impoundment into early summer for brood protection and the increased water supply should result in a better hay crop on higher portions of the refuge and Miller's property.

WCC Enrollee Tyndall spent over a week cleaning sediment from the Bird Creek ditch where it enters the refuge. This

section needs cleaning every year or so because of the heavy silt load carried by irrigation water.



#8-WCC Enrollee Jo Ellen Lively packing section of Camas Ditch bank. 86-HEC



#9-WCC Enrollee's Suzanne Tyndall and Jo Ellen Lively installing a water control structure in Willard Pond dike. 86-HEC

A water control structure (18" CMP w/slidegate) was placed in the Willard Pond Dike. This will increase water holding capability and allow better regulation in an area used extensively by the sandhill cranes.

Metal roofs were placed on the gas house and the pumphouse at headquarters and the kitchen addition to the Whitcomb Cabin. Surplus materials were obtained from a building at Ridgefield NWR.

4. Equipment Utilization and Replacement

A Caterpillar Model 12 (1964) motor grader was obtained surplus from Fort Lewis Army Depot. This is a considerable improvement over the well-used Austin-Weston 99 (1953) which will now be surplused.



#10-Caterpillar (1964) Model 12 grader was received excess from Fort Lewis to replace 1953 Austin-Weston. Note air conditioned cab insures 'quick' work of winter snow-plowing jobs. 86-HEC

We said goodbye to an old friend when the 1955 International truck-tractor was sold at auction. With its six cylinder gas engine and low gearing it would always go, but very slowly.

Vehicle inspections were made to meet Maintenance Management System requirements.

The small Combee airboat from Ridgefield was transferred to Conboy.

5. Communications Systems

A base unit from the old LCRR Complex office was installed at Conboy and provides limited contact with Ridgefield.

The other radio systems we use provide contact with Klickitat County Sheriff's office, Washington State Patrol and Department of Natural Resources, and continue to work extremely well. They certainly provide that extra element of SAFETY when working alone away from a telephone or when working law enforcement.

6. Computer Systems

We benefit from the presence of the computer at Ridgefield NWR especially with budget analysis and word processing capabilities.

7. Energy Conservation

There seems to be little left to be done on energy conservation at Conboy. Everything has been insulated and weather stripped for several years.

Distance to the Ridgefield NWR office is 115 miles one way. A trip around the valley to check the refuge is 30 miles. We have cut the number of trips to a bare minimum and use the 3-wheeler to get around the refuge when practical.

8. Other

The HQ site plan was completed by Pete Wehr from R.O. Engineering. He visited the site and with input from Managers Wiseman and Cole and District ORP Susan Saul was able to draft a suitable plan for future headquarters development. Eventually the old ranch buildings that currently serve as shop and storage will be moved or replaced to provide the public an unobstructed view of Mount Adams from a new interpretive site. A potential site for the Whitcomb Cabin was located and included in the draft.

Top Hat Stoveworks of White Salmon installed an eight foot chimney liner flue system in the HQ residence living room fireplace. This makes a 'safe' connection for the free standing wood stove that had been vented into the firebox a few years ago.

YCC enrollees replaced the old weathered sign adjacent to the refuge entrance road. It is an attractive improvement.



#11-YCC enrollee's pouring concrete to support
new headquarters road sign. L-R Jones,
Smith, Bean, Pepper and Cooper. 86-HEC

They also constructed a picnic table for YCC and public use at refuge headquarters.



#12-YCCer's sanding rough edges of new picnic table for refuge headquarters. L-R Peppers, Sykes, Bean and Cooper. 86-HEC

J. OTHER ITEMS

3. Items of Interest

Conboy staff and volunteers contributed several days assisting at the new Pierce NWR also administered by Ridgefield. Tasks included:

- . YCC & WCC overnight trip to rebuild boundary fence
- . WCC trip to rip rap under new bridge crossing
- . Planting 10,000 willow cuttings along Hardy Creek
- . Formulating pasture management plan with SCS
- . Visits with Mrs. Pierce to discuss management of the area
- . Planning new domestic water supply system

The Duck Stamp Recognition sign was installed near refuge headquarters. No comments have been received to date.

A Maintenance Management Review of buildings was conducted by H. Troester from the Regional Office and refuge staff.

Several items identified needing work included: roofing of residence; adding new lights to storage building; and several minor repair jobs. Eventual replacement of the shop and storage building was planned. The review was a good one, it's helpful to have a new look at things once in a while.

Manager Cole attended Basic Refuge Managers Academy at Blair, Nebraska. Even after 14 years of service the session was informative and productive (you can teach an old dog new tricks). Many new friends were made. Dick Rodgers deserves a special 'thanks' for his efforts to make the academy a success. The many speakers and activities he planned were certainly worthwhile and enlightening.

Members of the R.O. Programmatic Evaluation Team visited the refuge for a briefing on development and acquisition plans.

Manager Cole addressed the Klickitat County Tourism Board in Goldendale and passed out refuge brochures to members. Many of the members were unfamiliar with refuge programs and potential.

Manager Cole assisted refuge neighbor Harry Miller with installation of boards in his water control structure in Camas Ditch. Use of the refuge airboat made getting to the structure easier (and more exciting) for him than slogging through 1/2 mile of knee deep water. Having the boards in place helped hold some spring runoff that benefitted both Miller and the refuge. Hopefully such cooperative efforts will pay off in the future. Miller is also on the Drainage District Board.

Carey Smith and Brian Sharp (R.O. Biologists) spent part of a day becoming familiar with the refuge. They received a conducted tour from WCCer's Tyndall and Lively.

Manager Cole attended a week long 'Basic Procurement' training at Portland, Oregon. This provided a 'formal' introduction to the proper method of doing business.

Donal Mullineaux, renowned expert on Mount St. Helens eruptions both past and present, visited the refuge the summer of 1985 to take core samples from past ash layers. The results of his efforts came early in 1986. They may not be of importance to present actions taken by the refuge but are of general interest and provide a look at our geologic past. Basal peat was radiocarbon dated at 10,888 years. Mt. Mazama ash is roughly 7,000 yrs. old.

TABLE II

DEPOSIT	DEPTH IN CM	THICKNESS IN CM
Mount St. Helens set P	43-45	0-2
Mount St. Helens set P	46-48	2
Mount St. Helens set Y	53-55	2
Mazama (Crater Lake)	85-92	7
Ash beds above are within the peat		
Base of peat at	133	
MSH set J probably layer Jb	133-139	6
MSH set J probably layer Jy	139-154	15
Clayey sand	154-184	
Ash basaltic	184-186	1-2
Mount St. Helens set S	216-218	2
Bottom of hole	about 250	

4. Credits

This report was written by Refuge Manager Cole, reviewed by complex staff and typed and assembled by Joan Goodson.

K. FEEDBACK