Wildlife Program

Week of March 18-24, 2013

SCIENCE DIVISION

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

Wildlife Management

Sage Grouse Recovery: On March 19-20 Michael Schroeder (Research Scientist) and Mike Atamian (Region 1 Wildlife Biologist) attended the Habitat Assessment Framework Workshop in Burns, Oregon. The workshop was designed to provide training for the evaluation and documentation of the primary habitats needed to support sage-grouse. Additional objectives included techniques for proposal evaluation, monitoring of habitat treatments, monitoring of habitat status at appropriate scales, evaluation of land use plans, application of consistent methods, and development of layers to depict conditions. The workshop included a full day in the field using established techniques for habitat evaluation. Some of these techniques may be applicable to the Washington Department of Fish and Wildlife (WDFW) effort to monitor ecosystem integrity on wildlife areas. Michael Schroeder gave a presentation on monitoring efforts for greater sage-grouse in Washington.

From March 21-22 staff captured sage-grouse near the town of Plush, Oregon. Oregon Department of Fish and Wildlife (ODFW) provided WDFW with a permit to translocate 20 sage-grouse to Washington. Participants included Mike Atamian, Mike Schroeder, Sara Gregory, Dawn Davis (WDFW Biologists), Kim Thorburn (volunteer), Digger Anthony (U.S. Fish and Wildlife Service-USFWS), Jason Lowe (Bureau of Land Management-BLM), Eric Ellis (BLM), Duane Wilson (Volunteer), and Kourtney Stonehouse (Washington State University student). The group captured five male and two female sage-grouse on the first night with the aid of spot-lights and nets. Mike Schroeder drove the birds to Pendleton for a health certificate from a veterinarian and then to Coulee City to pass them off to Juli Anderson (WDFW Manager of Swanson Lakes Wildlife Area). Mike Finch (WDFW Assistant Manager of Swanson Lakes) released the birds on the morning of March 23. On the second night following a similar handling process, five males and three females were translocated to Washington.

Black-tailed deer research: Cliff Rice with the assistance of district staff and excellent work by Northwest Helicopters, captured and fitted 32 black-tailed deer does with GPS tracking collars and vaginal implant transmitters (VITs). Twenty-six of the currently deployed collars receive radio signals from their respective VITs and transmit the status of the VIT (expelled/not expelled) to the office via satellite/email. Fawns from these does will be captured in May and June to assess their survival.

Oregon Spotted Frog Surveys: Tammy Schmidt with assistance from Lori Salzer conducted 2013 Oregon Spotted Frog egg mass surveys. Last week they documented Oregon Spotted Frog use in the Mima Creek drainage. They counted a total of 16 egg masses for this species. This new location is over six river miles from known sites in Thurston County.

Recent Publications and Scientific Presentations

Pacific Seabird Group: Scott Pearson attended the annual Pacific Seabird Group (PSG) meeting. At the PSG, Scott presented one paper and was a co-author on three other papers. WDFW co-authors included Monique Lance, Shannon Knapp, and Joe Evenson. Paper abstracts are available at the PSG annual meeting web site: http://www.pacificseabirdgroup.org/

RISKS TO TOP-LEVEL PREDATORS REVEAL COMMUNITY-LEVEL CHANGE IN A MARINE ECOSYSTEM Nacho Vilchis*, Christine K. Johnson, Scott Pearson, Joe Evenson, Peter Davidson, Karen Barry, Marty Raphael, and Joe Gaydos

MARINE AND TERRESTRIAL INFLUENCES ON SPATIAL AND TEMPORAL DISTRIBUTION OF THE MARBLED MURRELET IN THE PACIFIC NORTHWEST Martin G. Raphael*, Andrew Shirk, Gary A. Falxa, Thomas Bloxton, Jr., Monique Lance, Deanna Lynch, Sherri Miller, S. Kim Nelson, Scott F. Pearson, and Craig Strong

TAKING THE PULSE OF PUGET SOUND: DEVELOPING A MARINE BIRD INDICATOR FOR ASSESSING ECOSYSTEM HEALTH Scott F. Pearson and Nathalie Hamel

A MODEL APPROACH FOR ESTIMATING BURROW NESTING SEABIRD COLONY SIZE, TRENDS, AND HABITAT ASSOCIATIONS Scott F. Pearson, Peter J. Hodum, Thomas P. Good, Michael Schrimpf, and Shannon M. Knapp

Marine Mammal foraging ecology: Monique Lance and Steve Jeffries are coauthors of two recently published manuscripts in the Fishery Bulletin. Both of these papers are a result of a National Science Foundation grant and the excellent collaborative relationship Monique and Steve have fostered with their coauthors.

Bromaghin, J. F., Lance, M. M., Elliott, E. W., Jeffries, S. J., Acevedo-Gutierrez, A. & Kennish, J. M. 2013. New insights into the diets of harbor seals in the Salish Sea of western North America revealed by quantitative fatty acid signature analysis. Fishery Bulletin 111: 13-26.

Howard, S., Lance, M., Jeffries, S. & Acevedo-Gutierrez, A. 2013. Fish consumption by harbor seals (Phoca vitulina) in the San Juan Islands, WA. Fishery Bulletin 111: 27-41.

Climate change and connectivity: John Pierce is a coauthor of a recently published manuscript in Conservation Biology. This paper describes the methodology that Tristan Nuñez and others developed to identify important connectivity areas along temperature gradients in response to warming climate.

Nuñez,T.A., Lawler,J.J., Mcrae,B.H., Pierce,D.J., Krosby,M.B., Kavanagh,D.M., Singleton,P.H. and Tewksbury, J.J. 2013. Connectivity Planning to Address Climate Change. Cons.Bio. 27(2): 407-416.

Western Gray Squirrel population dynamics: Matt Vander Haegen, Gene Orth and Mary Linders have been notified that their paper describing "Survival and causes of mortality in a

northern population of western gray squirrels" has been accepted in the Journal of Wildlife Management.

REGION 1

Wolf Management

District 1: Conflict Specialist Shepherd and Private Lands Access Technician Bendixen installed fladry around a calving operation on Deep Creek in the vicinity of the Smackout wolf pack. The radio-collared individuals of the Smackout wolf pack were detected while installing fladry. Carcasses of adult cows, which died from natural causes, and a calf, which died from unknown non-predatory causes, although the calf was scavenged by ravens and eagles, were observed and investigated. Fladry was installed around the carcasses as well. Discussion of carcass disposal and location of calving pasture was also discussed. A meeting was held to discuss the Smackout pack range-rider program with funding partners and grazing allotment permit holders. Contracts were discussed as well as sharing of locations of radio-collared wolves, wolf behavior, and equipment needed.

Cattle in a calving operation now surrounded by electrified fladry west of Smackout Meadows along Deep Creek. Wolves from the Smackout pack were heard with a telemetry receiver while installing fladry.

Fladry surrounding calving operation along Deep Creek west of Smackout Meadows.

Conflict Specialist Shepherd attended depredation training taught by Carter Niemeyer and Dr. Kristin Mansfield (WDFW) in Ellensburg.

Hematoma on the spine of an elk carcass was inspected by Carter Niemeyer and a Walla Walla County Sheriff's Department employee.

District 3: District Biologist Wik was contacted by a local reporter for the Lewiston Tribune about a report of wolves in the Blue Mountains. Apparently, at the Asotin County

Commissioners meeting this past week, somebody informed the commissioners that there were five wolf packs inhabiting the Washington Blue Mountains. The reporter was given current information and Wik will try to contact the commissioners in the near future to provide accurate information.

Biologist Rasley met with a cattleman on the North Touchet River in Columbia County regarding our Damage Prevention Cooperative Agreement (DPCA) livestock contract. After our meeting we were able to complete our new DPCA Livestock contract. Biologist Rasley attended the mandatory Wolf/Livestock training in Ellensburg this week. The training was very helpful and included a necropsy on an adult bull elk.

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

Wildlife Areas

Grouse tracking at Swanson Lakes Wildlife Area (SLWA) and vicinity – Volunteer Dr. Kim Thorburn conducted a sage grouse lek survey on Tuesday. She found 12 males and 9 females at the lek. Only four of the males and three of the females had radio signals. A male with a leg band, but no signal, was photographed up close. Wildlife Area Assistant Manager (WAAM) Mike Finch contacted Corky Roberts, a pilot WDFW uses for aerial telemetry, about setting up a flight shortly after all sage grouse are released at SLWA next week.

Leg-banded male sage grouse surveyed at the Swanson Lakes Wildlife Area vicinity on March 19, 2013. *Photo by Kim Thorburn.*

Sage grouse lek surveyed at the Swanson Lakes Wildlife Area vicinity on March 19, 2013. *Photo by Kim Thorburn.*

Chief Joseph Wildlife Area – Weed Control: Biologist Woodall looked at some of the low elevation areas that burned in last year's wildfire. These areas were aerially sprayed recently by a local contractor. Initial results look good. Attempts to reach higher elevation benches proved fruitless with hail and snowfall on the ground. A check of these areas will be made next week if weather conditions allow.

Weed control on the Chief Joseph Wildlife Area.

REGION 2

Wolves

Chelan County

On Monday, March 18 we received a report of a dead bull elk in a pond with wolf tracks surrounding the pond in Pitcher Canyon southwest of Wenatchee. Biologist Volsen responded and there were no obvious outward signs of wolf attack other than a puncture, and the wound appeared more as scavenging than wolf attack. The family wanted the elk removed from the ranch so it was loaded into Biologist Volsen's truck and was taken to Wenatchee.

The opportunity presented itself to provide the elk to the wolf depredation training that was taking place in Ellensburg on March 19, so Biologist Becker took the elk to Ellensburg where he, Dr. Mansfield and Carter Niemeyer did a necropsy on the elk. The cause of death was undetermined; however, there was no evidence of carnivore involvement. The elk was estimated to be 8- 10 years old, and showed signs of having had a previous trauma and resulting injuries. The wound on the rump was consistent with a scavenging event and not the result of a wolf attack while the animal was alive. A neighbor in Pitcher Canyon had also gotten a picture of a wolf on their trail camera a few days before this incident was reported. Biologists Becker, Volsen and Gallie looked at the image and could not tell if it was the same or a different wolf captured on camera in November 2012.

Bull elk removed from the farm pond in Pitcher Canyon.

A puncture inside the rear leg of this wounded elk is pointed out.

Biologist Volsen and Becker had subsequent discussions with the family about the incident and what it might mean to their ranch to have wolves near. They also showed us an image of another dead bull elk that had been consumed, and told us they had placed a trail camera near the carcass.

On Sunday, March 24 Biologist Volsen received a phone call from the ranch family in Pitcher Canyon saying that they had recovered images of two wolves on the bull elk carcass. Images sent confirmed two wolves, and that one of the wolves was suspected to be the same wolf photographed in the Entiat earlier in the month. Red tags in the ear and the coloration of the wolf appear to be the same, with Biologist Becker having the same opinion.

Two wolves in Pitcher Canyon (date/time stamp is incorrect). The ear tag can be seen in the right ear of the wolf in the foreground.

The other landowner in the canyon that recorded images of wolves previously also recorded images of what we think are these two wolves. However, we have not been able to view these images yet. At this point we are working with the ranch to gain access and to collect more information on the number of animals.

Okanogan County

Wolf Management: Biologist Fitkin and Officer Day responded to a reported possible wolf depredation on a goat near Davis Lake in Okanogan County. No wolf or wolf sign was observed. Evidence on site indicated a cougar killed the animal shortly before the owner discovered it missing. Members of Biologist Beausoleil's crew with assistance from Enforcement staff followed up with efforts aimed at capturing, collaring and moving the animal. Depredation forms are forthcoming.

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

<u>Wildlife Management</u>

Reintroduction Preparations and Infrastructure Work: Research Scientist Becker and Scientific Technicians Brooks Kohli and Anthony Saner observed the first kits of 2013 that have emerged from natal burrows in the large enclosures at Sagebrush Flat Wildlife Area. Technicians Saner and Kohli worked on building nursery areas to accommodate the genetic sampling and release of the new kits beginning in April.

A new pygmy rabbit kit in the large enclosures basks in the sun.

Wolverine Research: The project recently captured our fourth animal of the season, another new young male, and outfitted it with a satellite telemetry collar. We currently have three new young males on the air along with our matriarch Xena. Our capture season concluded this week; however, next month we will conduct aerial surveys of known female home ranges in attempt to locate any possible natal dens. In the meantime it will be interesting to see how these new young males distribute themselves in relation to other known male territories. Genetic relationship analysis from DNA samples is pending. On a related note, DNA analysis of a young male (Special K) captured but not collared last year indicates it is the same animal that Park Service staff documented on Sauk Mountain many miles to the west last summer. Even more intriguing, DNA work also showed that Special K visited Xena's natal den site from last spring at an unknown time. This adds to our growing knowledge of wolverine ecology in the North Cascades Ecosystem and reinforces the idea that wolverines are more social than originally thought. In addition, wolverines remain a topic of local interest (see comic on next page).

New male wolverine outfitted with a satellite telemetry collar. *Photos by U.S. Forest Service.*

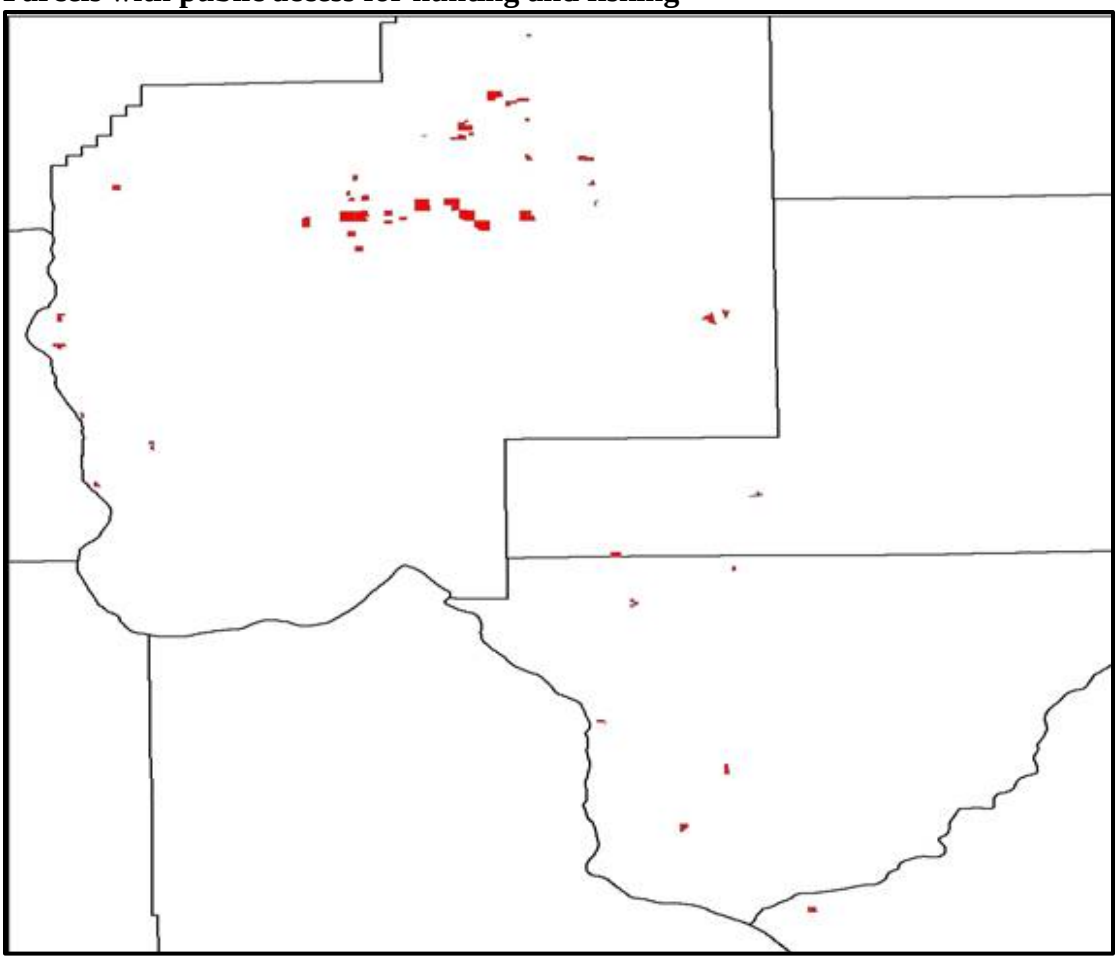
Safe Harbor Agreement Surveys: Becker, Kohli and Saner completed surveys for pygmy rabbit occupancy on some Safe Harbor enrolled lands that will be rehabilitated for the Conservation Reserve Program (CRP). No pygmy rabbits were found on the land and the landowner will begin habitat modification at the end of the month.

Scientific Technician Kohli surveys Conservation Reserve Program land for pygmy rabbits.

GOAL 2: PROVIDE SUSTAINABLE FISHING, HUNTING AND OTHER WILDLIFE-RELATED RECREATIONAL EXPERIENCES

<u>Private Lands/Access</u>

Parcels with public access for hunting and fishing



Dedicated Hunting Rights: Biologist Dougherty finalized all the approximate location properties that had hunting and fishing rights that were retained by the Bureau of Reclamation (BOR) for WDFW. The present status of the property rights were verified by WDFW real estate services and totals about 8,700 acres. All relative information has been entered into an ArcGIS database for distribution to any interested parties. Biologist Cotton presented the information at the quarterly meeting with BOR staff. The information will be presented at the District Team Meeting next week. Biologist Cotton is coordinating a meeting with Region 3 to discuss the next steps. It appears that many of these sites will have low or no potential for hunting; some are highly developed orchards, others have homes, others have access or management issues. It is highly likely that the current owners are unaware that the public has access to their property. We will have to proceed cautiously.

REGION 3

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

Wildlife Management

Tieton Bighorn Sheep: Biologist Bernatowicz responded to reports of sick and dying bighorn sheep along Highway 12 (Tieton herd). It quickly became apparent that a significant mortality event was probably occurring. Volunteers from Safari Club International, who were experienced observing sick bighorns from the Yakima River Canyon pneumonia outbreak, were mobilized for a survey. Section Manager Harris also participated.

One of many bighorn sheep carcasses found in the Tieton herd.

Within the core survey area, 25 live and 23 dead bighorns were observed. Another 10 live sheep were found further east, but that area was not searched for carcasses. Coughing sheep were

observed across the range. Based on carcass decomposition, it appears the die-off may have started in January or early February. Samples were collected from the freshest carcasses and sent to Washington State University for analysis of likely pathogens.

Colockum Elk Survey: Biologist Moore finished the modeling for the Colockum Elk Survey. The model estimates put the total population at 5,712 with calf and bull ratios of 31 and 10 per 100 cows, respectively.

Wildlife Areas

Parke Creek Restoration Project: L.T. Murray staff dug over 1,300 holes at the Parke Creek restoration site and several burned sites in the Little Parke Creek drainage to prepare for planting. On Saturday, local volunteers helped plant one-gallon potted blue-bunch wheatgrass and Great Basin wildrye plants.

Volunteers planting grass on the Parke Creek Restoration Project.

Other

Winter Conditions: The annual elk and sheep feeding operations have ended for the year and unsettled spring weather continues. Freezing temperatures are common at night, with daytime highs in the 50s.

REGION 4

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

Wildlife Management

Oregon Spotted Frog Survey Project: Seasonal Biologists Johnson and Bauman continued to conduct Oregon spotted frog (OSF) surveys at historically occupied and new sites where landowner permission has been obtained. Several sites were surveyed during the week and Biologist DeBruyn assisted with landowner contacts and surveys, while Biologist Danilson followed up with landowners and coordinated with the USFWS liaison for this project. Bauman and Johnson visited 10 sites, a combination of private land and Whatcom Land Trust property, and found Oregon spotted frog eggs at two sites, for a total of 57 egg masses in four clusters.

This is the third year that District 14 personnel have conducted OSF surveys in Skagit and Whatcom counties. The objective of the project, funded by USFWS, is to further delineate the geographic range of this sensitive species to assist this agency in conducting a status review of OSF in accordance with the Endangered Species Act.

Recently discovered Oregon spotted frog egg masses.

Swan Mortality and Morbidity Project: This week technician Anderson continued to respond to swan hotline calls regarding sick, injured and dead swans in Skagit, Whatcom, and Snohomish counties. Two trumpeter swan carcasses were collected this week from Skagit and Whatcom counties. A feather pile was found in a Skagit County quarry pond, and a swan from Whatcom County believed to have died as a result of a collision with a power line. In addition Technician Anderson followed up on re-sighting previously released swans. He and Biologist DeBruyn went

through all the tissue samples collected this season and began preparations for transporting and delivering them to The Canadian Fish and Wildlife Service, which is scheduled for next week.

	Skagit	Snohomish	Whatcom	Sumas	TOTAL
Power line suspect	35	5	30		70
Lead suspect	26	1	13	4	44
Trauma*	6		7	6	19
Unknown	16		3		19
Feather Pile	8		4	6	18
TOTAL	91	6	56	16	170

North Cascades Elk Herd Clover Trapping Project: Biologist Danilson and Technician Anderson conducted trap checks, baited trap sites, and assisted in the processing and release of two cow elk. A mature cow (originally translocated from Mount Saint Helens in 2003) was recaptured and outfitted with a new radio collar (her old collar was no longer functional). A yearling cow (from the same group) was captured three days later at a different site more than a mile away. Seven elk have been captured this year. Danilson also assisted in relocating one trap to the Skagit River area to target elk that will be outfitted with GPS collars supplied by one of the tribes. Trapping efforts will continue for one more week.

Game camera picture of a cow elk radio collared just three days earlier. The yearling cow just entering the trap was captured moments after this picture was taken.

North Cascades Elk Herd Annual Population Surveys: Biologist Danilson and DeBruyn participated in the first round of aerial surveys of the North Cascades elk herd. A total of 622 elk were observed during the two days the surveys were conducted. The total number of elk observed was 622 (the most observed since new survey protocols were instated in 2006). This is,

in part, an artifact of revising survey area boundaries to include areas where this growing population has expanded over the past several years.

Overall sightability of elk was low (15 of 42 functional collars observed during survey), so overall population estimates won't be finalized until the second survey (scheduled for the week of April 1) is completed. However, a calf:cow ratio of 35:100 is indicative of good juvenile recruitment and winter survival. The bull:cow ratio of 21:100 observed during the first round of surveys is at the lower end of what has been observed in recent years. However, since not a single one of the nine still functional bull collars was observed, it is clear that bull sightability was extremely low during the surveys, suggesting this preliminary bull:cow ratio is biased low.

A cow-calf group (above) and a group of bulls (below) observed during the North Cascades elk herd aerial surveys. As suggested by the picture below, roughly half of the mature bulls observed this week had already shed their horns.

Common Loon Banding Efforts in District 12: Biologist Anderson worked with Hancock Timber Management biologists and Biodiversity Research Institute (BRI) to outline collaborative banding efforts for the 2013 season. BRI provided a proposal to renew similar efforts and collaboration with Hancock and WDFW in King County.

Citizen Science Collaborative Efforts with Woodland Park Zoo (WPZ): Biologist Anderson met with Woodland Park Zoo Education Staff School and Community Engagement Supervisor Katie Remine and WPZ Vice President of Education Jamie Creola regarding future opportunities for citizen monitoring and collaborative projects that meet similar goals of WPZ and WDFW in meeting conservation needs of area wildlife and engaging citizenry. Both entities are in a planning mode but there is much opportunity to collaborate given similar goals to utilize citizens to meet wildlife management conservation needs.

Seattle City Light (SCL) Wildlife Research Program (WLP) Grants: Biologist DeBruyn reviewed grant proposals for the SCL Wildlife Research Program. This is a program mandated by dam licenses to mitigate their effect on wildlife. Current proposals include those to study Elk, Pikas, Wolverine and Lynx/Snowshoe hares.

Private Lands/Access

Region 4 Spring Bear Hunt: Biologists Danilson and Roozen continued to make preparations for the upcoming spring bear hunting season. Danilson finalized a notification letter, while Technician Otto ensured that mailing addresses were current before this letter went out on March 15. This letter informs hunters about the upcoming landowner-hunter coordination meeting, where hunters will receive access keys, maps, and other information. WDFW Wildlife Program and Enforcement personnel will attend the meeting, which is scheduled for April 13.

Wildlife Areas

Cherry Valley Fish Passage Project: Snoqualmie Wildlife Area Manager Brian Boehm met with WDFW Noxious Weed staff Tom Wampler to discuss site prep plans scheduled for the last week of March. A unique all-terrain vehicle called a “Marsh Master” will be used, as well as mowing, rototilling and applying herbicide to combat the reed canary grass prior to planting in April. A number of staff will be on site taking advantage of the drier weather conditions.

Cherry Valley Unit: Snoqualmie Wildlife Area Manager Brian Boehm met with a potential agricultural lease holder to discuss site conditions and a planting plan for approximately 35 acres of crops. The area has not been farmed for a few seasons and reed canary grass has reclaimed a good portion of the fields. Planting grain crops will help deter the noxious weed and also provide forage and cover for waterfowl and pheasant.

Snoqualmie Wildlife Area: Snoqualmie Wildlife Area Manager Brian Boehm attended the Snoqualmie Watershed Forum meeting on March 20, 2013. An announcement was made to the Forum that Brian Boehm has been appointed the Snoqualmie Wildlife Area Manager and that he would like to continue collaborative relations with the Forum concerning restoration and agricultural efforts in the Valley.

Ebey Island Unit: Snoqualmie Wildlife Area Manager Brian Boehm attended a meeting with Region 4 Director Bob Everitt and Lew Moore from the Snohomish County Sustainable Land Strategy to discuss agricultural options and plans for the Unit. There are approximately 500 acres of land available for agriculture with a considerable portion of them suitable for grain and vegetable crops. Continued collaboration and a mutual interest in agriculture was the result of the meeting.

Port of Bellingham Tennant Lake Wetland Enhancement Project: Manager Kessler coordinated with the Port of Bellingham managers on the Tennant Lake wetland enhancement project. Maintenance work on the project will soon begin.

Wood Duck Nest Boxes: Manager Kessler met with a Master Hunter who will be building and installing new Wood Duck nest boxes on the Tennant Lake unit.

GOAL 2: PROVIDE SUSTAINABLE FISHING, HUNTING AND OTHER WILDLIFE-RELATED RECREATIONAL EXPERIENCES

Wildlife Management

Falconry Issues: Biologist DeBruyn met with Falconry Coordinator Patricia Thompson to discuss a wide range of falconry issues. DeBruyn also inspected a facility for an apprentice falconer on Fir Island.

Woodland Park Zoo-WDFW Citizen Amphibian Egg Mass Monitoring Project: Biologist Anderson provided identification guidance to a number of citizen participants with this collaborative program, as well as reiterating how to document wildlife occurrences of this type in the field.

Seattle High Point Neighborhood Center Presentation with Seattle Parks and USDA Wildlife Services (USDA WS) – Urban Wildlife: Biologist Anderson provided a two hour living with urban wildlife outreach session to 65 children, most of them in a Head Start Program for children with English as a second language, and 15 adults involved in the Seattle Parks High Point Neighborhood Center day learning program.

Anderson, Parks staff and USDA WS staff provided hands-on efforts with pelts and specimens. They discussed what to do to avoid general urban wildlife conflict. They also focused quite a bit on coyote ecology, how to avoid development of a habituated individual, and why coyote is a common local wild animal and an important part of our urban ecosystem.

Private Lands/Access

Waterfowl Quality Hunt Program: Technicians Deyo and Otto constructed semi-permanent blinds on select private lands enrolled in the Program. Otto and Deyo also repaired and prepared select parking areas enrolled in the Program.

Bow Hill Road Pheasant Release Site: Biologist Roozen assisted Managers Link and Calkins finish pheasant hunter survey and prepare survey for distribution. Roozen also arranged for contacted repairs and improvements at the private parking area for site.

Wildlife Areas

Stillwater Revetment Removal Project: Restoration Projects Coordinator Brokaw compiled comments from the two public meetings. There was only one comment submitted in writing, which was in support of the project. WDFW, Ducks Unlimited (DU), and Wild Fish Conservancy staff also reviewed verbal comments from the meetings. The most common concern regarded public access of the south portion of the property and how it has become increasingly difficult in the last several years. Although access is not expected to become more difficult as a result of the project, WDFW and DU are identifying funding sources to potentially build suspension bridges to improve access. The project sponsor, Wild Fish Conservancy, submitted permit applications for the project. WDFW staff reviewed and signed the applications.

Skagit Agricultural Enhancement and Lease Program: Manager Belinda Rotton and Natural Resource Specialist Greg Meis discussed potential lease arrangements for the Samish, South Padilla Bay and DeBay Slough Units with Private Lands Coordinator Brandon Roozen regarding how this might overlap with the Hunter Access program. Farm plans and lease proposals have been requested, but no lease arrangements are currently completed. Natural Resource Specialist Greg Meis and Natural Resource Technician Curran Cosgrove installed and monitored beaver deceivers on the Island Unit. Field drainage conditions were also monitored on the Samish and Leque Island Units.

Samish Unit: Natural Resource Specialist Greg Meis and Natural Resource Technician Curran Cosgrove installed a new duck blind and staged materials for a Washington Waterfowl Association (WWA) work party scheduled for April 13. A WWA volunteer assisted with the installation and will likely coordinate on the work party.

Leque Island and DeBay Slough Units: Natural Resource Specialist Greg Meis and Natural Resource Technician Curran Cosgrove began treatment of early emerging weeds such as poison hemlock and blackberry.

Tennant Lake Boardwalk: Manager Kessler monitored the water level at Tennant Lake. He hiked in and adjusted the beaver dams and deceiver pipes. The lake water level is still too high for the boardwalk to be opened to the public.

GOAL 3: USE SOUND BUSINESS PRACTICES, DELIVER HIGH-QUALITY CUSTOMER SERVICE

Wildlife Management

Aquatic Lands Enhancement Account (ALEA) Grant Review: Biologist Milner continued reviewing grant applications for this round of ALEA grants. Over 80 grant applications were submitted. Milner is about half way through with the complete review and evaluation.

Wildlife Areas

Wiley Slough Working Group: Manager Rotton prepared draft summary from last week's meeting for the Wiley work group. Lands Agent Kye Iris, Habitat Biologist Brian Williams, and Manager Rotton met with the Dike and Drainage District #22 representatives to draft and clarify the language to include in Memorandum of Understanding (MOU) for the new pump station installation.

Sinclair Island: Manager Rotton met with Commissioner Ken Dahlstedt, Henry Hash and Bill Dowe from Skagit County Public Works to discuss their desire to develop a cooperative partnership to make habitat improvements and replace the existing public access dock to Sinclair Island. Manager Rotton has requested an outline of the project basics and has begun internal discussions to determine WDFW's role in this project.

Volunteer coordination: Manager Rotton met with the Department Chair of the Environmental Conservation at Skagit Valley College to discuss the potential use of student volunteers to accomplish WDFW lands projects while providing the student with needed service requirements for the conservation program.

GOAL 4: MAINTAIN A HIGHLY SKILLED AND MOTIVATED WORKFORCE

Snipe Survey Bio 1: Biologist Milner offered the job, to the most qualified candidate and it was accepted. Milner completed the hiring paperwork. Milner notified the unsuccessful candidates and prepared the paperwork related to hiring to send to the Human Resources' office.

REGION 5

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

Wildlife Management

Sandhill Cranes: Biologist Anderson conducted a follow–up survey on a report of a pair of sandhill cranes on private property adjacent to the Department of Natural Resources (DNR) Trout Lake Natural Area Preserve. The birds were located and represent a potential breeding pair that could remain in the area throughout the summer. Sandhill cranes have just recently arrived on their breeding grounds in Klickitat County in the last three weeks. A coordinated ground survey will be conducted in April to determine the number of breeding pairs nesting at Conboy National Wildlife Refuge.

Biologist Anderson is also assisting the Habitat Division with a forest practice review of a proposed timber operation near sandhill crane nesting habitat adjacent to the Conboy National Wildlife Refuge. Disturbance buffers are generally considered appropriate in areas that may impact crane nesting. A follow-up site visit will be done next week to determine the necessity for management restrictions.

Sandhill cranes on private property adjacent to the Department of Natural Resources Trout Lake Natural Area Preserve.

Golden Eagle Survey: Biologists Bergh, George, and Holman conducted an aerial survey for occupancy of golden eagle territories in Lewis and Pacific counties. These three territories were randomly selected from the statewide historical database of golden eagle nest territories as part of an effort to assess current status and distribution of these birds. There were no observations of nests or eagles at any of the three territories; therefore they will not receive follow-up visits to assess productivity.

Large tree that once possibly held a golden eagle nest and is now held up by large cables.

Watchable Wildlife: The recent arrival of smelt in the Columbia River is also contributing to an interesting array of avian predators. A recent trip on the Columbia resulted in the observation of 12-14 eagles, including 5 golden eagles. The birds were feeding upon smelt that had spawned and were floating on the surface of the water.

Bald eagles can also be observed along the Cowlitz River during the smelt runs perching

along the river between Longview and Castle Rock. In addition to the eagles, gulls, and terns many sea lions were observed following the smelt runs to feast upon the small fish after they spawn. Best observation points are along the river at Kalama, the Woodland area, Willow Grove near Longview, and County Line Park along the Columbia at the Wahkiakum/Cowlitz County line.

Region 5 Deer Management: Biologist Holman summarized the results of the annual spring survey of deer on and near the Klickitat Wildlife Area that was conducted in early March. Klickitat Wildlife Area Manager VanLeuven, Enforcement Officer Bolton, retired Wildlife Area Manager Morrison, and Biologists George and Holman completed the survey. Survey conditions were favorable with calm, cloudy weather and mild temperatures.

A total of 260 deer were observed during the effort, with 242 classified. The fawn to adult ratio was 49 fawns per 100 adult deer, nearly exactly matching the 34-year average of 50 fawns per 100 adults. The total number of deer classified (242), is among the lowest counts observed since 1992 when this metric began to be recorded. The average number of deer classified has been 440 during this 22-year time span. Additionally, prevalence of the hair loss syndrome was quantified during the survey. Hair loss was observed in 16% of the classified animals and is most common in fawns.

Collectively, the survey indicates a relatively mild winter in the southern Cascades and Klickitat County. The low total count of deer is likely due in part to the mild conditions with deer widely scattered through their range, but may also reflect a decline in overall numbers. Prevalence of the hair loss syndrome remains a concern.

Wildlife Areas

Cowlitz Wildlife Area

Peterman Ridge Unit: Two Forest Practice Applications have been submitted for approval to the Department of Natural Resources. The applications are for culvert removal and procedures for abandoning the 1540 and 3000 lines per the Wildlife Area Road Maintenance and Abandonment Plan. Both projects are on the Peterman Ridge Unit.

Mount St. Helens Wildlife Area

Hall Road Tree Planting: Wildlife Area Manager Hauswald and Technician Sample planted 33 conifer saplings along the parking boundary of the Hall Road Wildlife Unit with plans to remove the metal t-posts that are currently acting as a temporary boundary. Plastic tree tubes were placed around each of the trees to protect them from being browsed by deer or elk. Several species of songbird were seen and heard in the tree line bordering the field of the Wildlife Area and included black-capped chickadee, golden crowned kinglet, red-breasted nuthatch, and a flock of pine siskin.

GOAL 3: USE SOUND BUSINESS PRACTICES, DELIVER HIGH-QUALITY CUSTOMER SERVICE

Wildlife Areas

Cowlitz Wildlife Area

Annual Report: The Wildlife Area annual report has been finished and submitted to Tacoma Power for review. The report is a required document for the Federal Energy Regulatory Commission (FERC) summarizing the Wildlife Area's annual accomplishments, operating budget, acquisitions, and next year's expectations.

GOAL 4: MAINTAIN A HIGHLY SKILLED AND MOTIVATED WORKFORCE

Wildlife Management

Northwest Scientific Association Conference: Biologist Stephens attended the annual Northwest Scientific Association Conference which was jointly hosted by the Cascadia Prairie Oak Partnership. Many interesting research and restoration projects were presented by various government and private entities. These projects were specific to Canada, Washington, and Oregon. The importance of working with private landowners to preserve and enhance sensitive habitats and reach recovery goals for listed species was a common theme.

Other

District 10 and Mount St. Helens Wildlife Area Winter Conditions

Past Weather: February temperatures and precipitation were both below average for the month. Snowfall for the month was minimal with little to no accumulation for the month on the valley floor on the Mudflow Unit of the Mount St. Helens Wildlife Area. Snow levels and temperatures have both risen lately, melting lower and middle elevation snow, but cold weather returned last week bringing light snow cover to the valley floor of the Mudflow Unit.

Short-Term Forecast: The 6-10 and the 8-14 day forecast are for above normal temperatures and normal precipitation.

Long-Term Forecast: The one month forecast model shows below normal temperatures and an equal chance for above average, below average, or normal precipitation. The three month forecast model is for below normal temperatures and precipitation.

Habitat: Forage is available at lower elevations, and elk appear to have fed heavily on willows and cottonwoods in the Mudflow Unit, while most areas above 3,000 feet currently have some snow cover, and areas above 3,500 feet have significant snow cover. Most south facing slopes are snow free to higher elevations. Green up has started in the lower elevations, but more than likely still a couple of weeks away for areas above 1,000 feet in elevation.

Snow Depths: See table below for detailed information.

Animal Concentrations: No unusual concentrations of elk noted to date. On March 1, 2013, a total of 180 elk were present on the Mudflow Unit monitoring area.

Animal Condition: The majority of animals observed to date, appear to be in fair condition although there are some with rough pelage and are in poor condition.

Mortality: No mortalities were observed this week.

Public Contacts: None to report related to winter conditions.

The public is reminded that the Mudflow Unit of the Mt. St. Helens Wildlife Area lying east of a line defined by Hoffstadt Creek, The North Fork Toutle and Deer Creek is closed to public access through April 30 to minimize disturbance and associated energy demands on elk wintering there.

MOUNT SAINT HELENS ELK HERD
2012/2013 WINTER CONDITIONS - SNO-PARK SNOW DEPTH,
NRCS SNOTEL DATA, AND SNOWPACK
From web page http://www.fs.usda.gov/activity/giffordpinchot/recreation/wintersports/?recid=31178&actid=91
http://www.wrcc.dri.edu/cgi-bin/sno_narr3_pl
http://www.wcc.nrcs.usda.gov/snotel/Washington/washington.html

SNOWPARKS:

Name	Elevation	12/07/2012	12/14/2012	12/21/2012	12/28/2012	01/04/2013	01/11/2013	01/18/2013	01/25/2013	02/01/2013	02/08/2013	02/15/2013
TRAIL OF TWO FORESTS	2,200'	No report	Trace of new snow	2ft of snow	More than 2ft of snow	No new report	No new report	No new report	No new report	10" new and 2 ft base	No new snow. 2ft total.	No new snow
MARBLE MT	2,700'	No new report	5" new snow	4ft of snow	More than 4ft of snow	No new report	No new report	No new report	No new snow. 72 inch base.	14" new and 80" base	No new snow. 84" base.	No new report
WAKEPISH	2,800'	No snow	5" new snow	42" of snow at the sno-park	More than 42" of snow	Sno-park inaccessible due to heavy snow	Sno-park inaccessible due to heavy snow	Sno-park inaccessible due to heavy snow	No new report	Sno-park inaccessible due to heavy snow	No new report	No new report

SNOWTEL STATIONS:

Name	Elevation	Stats	12/1-12/7	12/8-12/14	12/15-12/21	12/22-12/28	12/29-1/4	1/5-1/11	1/12-1/18	1/19-1/25	1/26-2/1	2/2-2/8	2/9-215
JUNE LAKE	3,340'	**Avg Snow Depth (inches)**	12.3	26.8	68.8	103.3	101.6	97.3	93.3	88.4	103.1	98.2	98.4
		Min Temp (F)	30.9	27.5	25.7	27.5	18.7	23.7	17.2	28.6	29.3	26.2	24.6
		Max Temp (F)	43.9	37.8	35.2	34.5	35.1	40.3	47.1	63	39	49.6	42.4
		Avg Temp (F)	36.6	32.7	29.9	31.1	27	33	28.8	44.9	33.8	36.4	33.1
		Year to date precipitation (inches)	68	72	82.9	84.6	85.9	86.3	98.6	97.2	106.3	109.3	109.8

Name	Elevation	Stats	12/1-12/7	12/8-12/14	12/15-12/21	12/22-12/28	12/29-1/4	1/5-1/11	1/12-1/18	1/19-1/25	1/26-2/1	2/2-2/8	2/9-2/15
SPIRIT LAKE	3,520'	**Avg Snow Depth (inches)**	1.1	9.6	19.1	27.8	26.1	19.7	20.1	18.1	25.9	24.7	25.3
		Min Temp (F)	31.5	19	19	22.3	20.3	25.3	9.9	27.7	28.6	12.7	23.2
		Max Temp (F)	48.4	41.9	44.4	35.6	41.7	46	54.4	54.3	42.1	48.2	43
		Avg Temp (F)	37.9	32.7	30.2	31.6	29.2	34.5	28.2	39.1	34.4	35.9	33.5

		Year to date precipitation (inches)	34.4	37.6	42.2	45.2	45.6	47.7	47.8	48.4	56.2	57.2	58.1

Name	**Elevation**	**Stats**	**12/1-12/7**	**12/8-12/14**	**12/15-12/21**	**12/22-12/28**	**12/29-1/4**	**1/5-1/11**	**1/12-1/18**	**1/19-1/25**	**1/26-2/1**	**2/2-2/8**	**2/9-2/15**
PEPPER CREEK	2,140'	**Avg Snow Depth (inches)**	0	0.17	14.7	24	24.6	23.8	22.8	23	28.9	25.4	23.3
		Min Temp (F)	32.4	30.4	30	30.4	21.6	27	12.9	23.9	33.1	28.4	23.7
		Max Temp (F)	48	43.2	36.9	36.9	39	41.4	43.5	55.2	43.7	53.8	45.9
		Avg Temp (F)	40.2	35.4	33	33.8	28	33.3	26.5	33.4	35.4	36.2	35.5
		Year to date precipitation (inches)	22.2	23.7	29.9	31	31.3	33.8	33.8	34.3	37.3	38	38.2

Name	**Elevation**	**Stats**	**12/1-12/7**	**12/8-12/14**	**12/15-12/21**	**12/22-12/28**	**12/29-1/4**	**1/5-1/11**	**1/12-1/18**	**1/19-1/25**	**1/26-2/1**	**2/2-2/8**	**2/9-2/15**
SHEEP CANYON	3,990'	**Avg Snow Depth (inches)**	12.6	25.7	61.3	96.3	93.6	88.4	84.7	81.4	102.7	102.5	103.4
		Min Temp (F)	29.1	21.9	23.4	25.5	20.5	23.7	14.5	25.5	28.2	24.1	23.9
		Max Temp (F)	42.6	36.5	33.8	33.6	39.9	39.4	54.4	58.5	37.8	52.5	39.2
		Avg Temp (F)	35	30.7	28.2	30.2	28.4	32.3	29.1	43.6	32.3	35.3	31.7
		Year to date precipitation (inches)	60.4	63.8	69.6	77.3	81.7	86.3	86.3	87	95.9	98.3	98.9

Name	**Elevation**	**Stats**	**12/1-12/7**	**12/8-12/14**	**12/15-12/21**	**12/22-12/28**	**12/29-1/4**	**1/5-1/11**	**1/12-1/18**	**1/19-1/25**	**1/26-2/1**	**2/2-2/8**	**2/9-2/15**
CALAMITY	2500'	**Avg Snow Depth (inches)**	0	0	13	22	18.7	17.7	15.3	15	15.9	14.2	11.2
		Min Temp (F)	33.8	32.5	29.1	31.3	23.7	28	21.2	32.5	32.4	31.3	30
		Max Temp (F)	47.7	41.2	40.3	36.3	36.1	43.5	56.7	62.1	43.2	48	42.3
		Avg Temp (F)	40.2	35.6	32.8	33.4	29.1	36	32.2	47.2	36.3	39.2	35.8
		Year to date precipitation (inches)	42.1	44.5	52.2	54.6	54.8	59.2	59.4	60.1	66.4	67.5	68

Snowpack % of Avg Snow Water Equivalent	**12/07/2012**	**12/14/2012**	**12/21/2012**	**12/28/2012**	**01/04/2013**	**01/11/2013**	**01/18/2013**	**01/25/2013**	**02/01/2013**	**02/08/2013**	**02/15/2013**
JUNE LAKE	no data	no data	180%	134%	no data	no data	147%	139%	149%	no data	140%
SPIRIT LAKE	no data	200%	410%	134%	447%	371%	350%	286%	414%	535%	486%
SHEEP CANYON	86%	91%	151%	165%	170%	184%	169%	145%	164%	173%	160%

02/22/2013	03/01/2013	03/08/2013	03/15/2013	03/22/2013
No new report	No new report	No new snow. 3ft total.	No new snow and 2ft base	No new report
No new report	15" new snow and 90" base	9" new and 84" base	No new snow and 6ft base	No new report
Sno-park inaccessible due to heavy snow	No new report	No new report	No new report	Sno-park inaccessible due to heavy snow

2/16-2/22	2/23-3/1	3/2-3/8	3/9-3/15	3/16-3/22
96.1	122.4	116	116.1	114
25.7	27.1	27	32	25
51.4	41.5	43	50	41
33.3	32.4	34.3	39.3	32.5
111.5	119.1	122.5	123.5	129.3

2/16-2/22	2/23-3/1	3/2-3/8	3/9-3/15	3/16-3/22
24.1	32	26	25	22.1
21.7	20.1	19	12	26
48.9	44.4	44	47	47
33.5	33	33.5	37.3	32.5

59.2	62.2	63.9	64	68.6

2/16-2/22	2/23-3/1	3/2-3/8	3/9-3/15	3/16-3/22
21.6	30.7	27	24.1	21.1
24.8	31.3	26	27	30
56.8	41.5	50	56	44
34.9	35.2	35.3	39.8	35.7
38.9	42.9	44	44.4	46.8

2/16-2/22	2/23-3/1	3/2-3/8	3/9-3/15	3/16-3/22
100.5	123	115.1	114.7	113.8
24.4	23.2	21	27	24
52.3	41.4	41	47	40
31.5	30.7	32.7	37.8	30.3
100.3	106.5	109.1	109.7	115.4

2/16-2/22	2/23-3/1	3/2-3/8	3/9-3/15	3/16-3/22
9.4	15.7	11.6	9	2.2
30.6	31.3	31	35	30
50.5	46	47	53	45
36.3	35.5	36.8	43.8	35.7
69.2	74	75.2	75.4	79.6

02/22/2013	03/01/2013	03/08/2013	03/15/2013	03/22/2013
130%	140%	no data	142%	2225%
398%	371%	344%	no data	no data
159%	153%	148%	139%	136%

REGION 6

GOAL 1: CONSERVE AND PROTECT NATIVE FISH AND WILDIFE

Wildlife Management

Golden Eagle Breeding Surveys: Aerial Survey – District 16 Biologists McMillan and Ament conducted an aerial survey for all historic golden eagle nest sites on the north and west areas of the Olympic Peninsula. This flight previously been scheduled, but weather conditions led to the cancellation of flight for numerous days during the past two weeks. Although there was some very strong down drafts and bumpy conditions at times, the observers were able to check all seven nest sites. The pilot did an excellent job of conducting slow circles around the nest tree stands.

The only nest that was observed was in the Maple Creek Territory. It was difficult to know if specific nest trees were still present or suitable to contain a nest since there was very minimal information to describe the nest trees. No golden eagles were observed during the survey. An effort was made to review access options for each nest site area. A few of the territories will be quite difficult to observe from the ground. The flight was a total of 3.6 hours and the team was slightly under the allocated amount of funding for district surveys. Biologist Ament has submitted the completed O/P form and invoices to Biologist Hayes for processing.

Ground Monitoring – Biologist Ament conducted a ground monitoring survey to the Pistol Creek Territory on March 22. She encountered snow on the road once again and had to hike into the area. She actually had sunshine during her hike into the area. She was able to hike into get good views of the stand that contained nest tree #2. Last time she was in the area she focused on locating nest tree #1. Ament spent over four hours in the area and scouted various view locations for both nest tree stands. She looked over many suitable nest trees, but located no nests. No golden eagles were observed within the territory. It began to cloud up later in the afternoon and she actually hiked out with some moderately heavy snow falling.

District 15 Biologist Hoenes spent half a day trying to get to a Golden Eagle territory that needed to be surveyed as part of the statewide effort to evaluate the number of historical territories that are occupied during this year's nesting season. The territory was initially scheduled to be surveyed by helicopter, but weather had prevented that happening for two weeks so Hoenes attempted to survey it from the ground. However, the attempt was fruitless because the blow-downs and rock slides had the roads completely blocked. Fortunately, the helicopter survey crew caught a break and was able to survey the site during the end of the week. Unfortunately, it was determined to be unoccupied.

White River Elk: Biologists Tirhi and Schmidt conducted a helicopter survey of elk in the Buckley/Enumclaw Valley in response to on-going complaints by local landowners and farmers of increasing elk causing damage to fields and yards. Tirhi and local enforcement have been working with local landowners for the past two years to minimize damage caused by resident and migratory elk. Tools employed to date include hazing materials (cracker shells and fireworks aimed at elk) and using master hunters to selectively harvest lead cows in order to reduce sub-

herd size and change behavior. Despite these techniques, elk continue to present a nuisance to local properties. In order to validate estimates of group sizes being reported by locals, Tirhi and Schmidt conducted a composition count. Elk were located at five of the six properties that had reported damage. A total of 126 elk were counted over the one hour flight including 85 cows, a minimum of 37 calves, and 4 spike bulls. Calf to cow ratio was 43:5. Elk were all visible just after sunrise in locations that would support future driving surveys, which Tirhi is negotiating with Tacoma MetroParks to initiate as a citizen science project. Tirhi will also coordinate with the Region 4 biologist on reaching out to local landowners to form a partnership on elk management and nuisance response.

District Team Meeting: Biologist Hoenes participated and coordinated the District Team meeting for Grays Harbor and Pacific counties. Attendees included representatives from Enforcement, Fish Program, Habitat Program, Wildlife Area Managers, and Shellfish Managers. The purpose of the District Team meeting is to identify and discuss management topics that influence all branches of the Department and not just the Wildlife or Fish Programs. Main topics discussed included Japanese eelgrass management, research in Willapa Bay, and improving shoreline access in Willapa Bay.