

## **SOUTH DAKOTA STATE REPORT**

*June 1, 2011*

Jeff Vonk, Secretary  
South Dakota Game, Fish and Parks  
523 E. Capitol  
Pierre, SD 57501

### **2010 Walk-In Area Program for Hunter Access**

A record level of almost 1.28 million acres of private land was enrolled in the Walk-In Area (WIA) program for the 2010 hunting season. SDGFP was also awarded a \$1.5 million grant from the USDA Farm Service Agency Voluntary Public Access and Habitat Incentive Program in September of 2010 to offer a one-time up front signing bonus to landowners who place CRP and WRP lands in the WIA program. Interest has been strong during the spring of 2011, with contracts being signed across the entire state with an enrollment of about 20,000 acres.

In 2008, GFP implemented the Controlled Hunting Access Program (CHAP) which provides additional flexibility for the landowner and more control of the number of hunters using the area. Thirteen CHAP areas totaling 16,317 acres were enrolled statewide in 2010.

### **Conservation Reserve Enhancement Program (CREP)**

In November of 2009, the SD James River Conservation Reserve Enhancement Program (CREP) received final approval and sign-ups began. This initiative is to enroll 100,000 acres within the watershed to address environmental issues and establish wildlife habitat. Along with the habitat established, landowners will receive a payment from the state on top of the federal CRP payment which allows public access for hunting and fishing. All acres enrolled within the CREP program must include the access component.

Enrollment in James River Watershed CREP has gone well. As of May 1<sup>st</sup> 2011, over 55,000 acres are either under contract or in progress of being approved at an annual cost to Game, Fish, and Parks of approximately \$1.6 million. Of the properties under contract, average enrolled size is 112 acres and over 80% are 10-year contracts. Enrollment has been most popular in the northeast part of the James River Watershed, however several enrollments on the south end of the watershed will provide needed habitat and access within one hour of the states largest populous area.

### **Aerial Predator Control**

South Dakota's predator control program is a cooperatively run program between South Dakota Game, Fish and Parks (SDGFP) and USDA-APHIS-Wildlife Services (WS). Each agency administers and operates different components of this program, with SDGFP providing predator control via ground methods (traps, snares, calling, shooting, and poisoning) and WS providing predator control via aerial control. This program experienced a significant change in 2011. In March, WS informed SDGFP that due to budgetary constraints they would no longer be able to provide aerial predator control. The airplane and staff that conducts predator control activities were instructed that they could not fly and WS is in the transition of leaving SD.

Several areas of SD have predator control districts; which are statutorily established livestock producer groups that impose taxes upon themselves to generate money to hire private pilots and gunners to complete aerial predator control. These districts provide limited aerial predator control which is coordinated with SDGFP staff. One of the largest challenges faced by the predator control districts is that it takes significant financial contributions to effectively reduce predators in areas where livestock occur and these groups are limited in the amount of funds they can generate. Additionally, there are many areas of the state where predator control districts do not currently exist. Consequently, there are several counties that are pursuing the process to establish new predator control districts, so that livestock producers can have some level of aerial predator control in the future. SDGFP remains committed to providing predator control via ground methods. However, without the ability to coordinate removal activities with WS aircraft, there will be an increased demand on SDGFP staff for more service.

### **Pheasant Population Status**

South Dakota offered phenomenal pheasant hunting during the 2010-2011 season. The estimated pre-hunt population of 9,840,000 birds was the third highest since 1965 and 12% above the ten year average. The pre-hunt population increased from nearly 8,500,000 birds in 2009. Approximately 72,000 resident and 100,000 non-resident hunters bagged nearly 1,850,000 roosters during the 79 day season, an 11% increase from the previous year. This was the fifth highest harvest since 1965 and 5% above the ten year average.

### **Winter Impact on Wildlife**

Widespread snowfall events and extended periods of below normal temperatures began in December of 2010, thus creating stressful conditions for resident wildlife for the winter of 2010-11. Knee deep snow was found across much of the state and up to 3 feet or more of snow on the level was experienced in northeastern South Dakota for much of January and February. Northeastern South Dakota experienced the most severe winter conditions in more than a decade.

Wildlife damage complaints and mortalities from starvation and exposure were reported and documented by department staff. Significant numbers of deer and turkey complaints on hay stacks and stored feed supplies were reported in western South Dakota, resulting in department staff working with landowners in attempts to alleviate damage caused by large concentrations of turkeys and deer. In western SD, some groups of deer were reported to number at almost 1,000. Some antelope herds in western and central South Dakota appeared stressed, with mortalities being reported for antelope. Unlike the winter of 2009-10 when several hundred thousand acres of unharvested corn in eastern South Dakota served as a food source and winter cover, pheasants appeared to be stressed in areas lacking suitable winter habitat and mortalities were documented by landowners and department staff.

Though it is difficult to ascertain the mortality level caused by this past winter to resident wildlife, department staff have considered this impact in season recommendations, in particular for antelope and mule deer in western South Dakota. Pheasant losses due to winter mortality appeared to be the highest in northeastern South Dakota. Available nesting habitat and favorable weather conditions during the nesting and brood rearing period will be critical for pheasant reproduction in 2011.

### **South Dakota Private Lands Database**

Designed and built to meet the Department's present and future needs, a Private Lands Database Application (PLDA) was recently launched that serves to standardize various database applications previously in use by a variety of Wildlife Division programs that serve and benefit private landowners. Developed by the

Timmons Group, the PLDA utilizes web-based forms to input and edit database information for all hunting access programs, private lands habitat projects, wildlife damage management assistance, and private fish pond stocking information. An easy-to-use set of workflows allows PLDA users to create new projects, work on existing projects, or view project accomplishments. A principal component of the PLDA is its reporting functionality, whereby a broad and diverse range of summaries and reports can be compiled and generated. This reporting functionality not only allows Division staff to better document, track, and report on all Wildlife Division programs assisting private landowners, but also to respond more effectively to various inquiries from citizens and legislators regarding Wildlife Division expenditures and accomplishments on private lands. Also built into the PLDA are components that track spatial history of private land program projects and accomplishments, ultimately which will assist in future expansion and interoperability with the geospatial components of the Division's current public lands database and mapping application (WILMA).

### **Chronic Wasting Disease Status**

South Dakota has been conducting surveillance for CWD since 1997 after it was discovered in captive elk herds. CWD was first found in free-ranging wildlife in the fall of 2001 when a white-tailed deer was voluntarily submitted for testing and subsequently was found to be positive with the disease.

Results from 2010 monitoring as of 24 May 2011 are as follows: 1) 245 elk sampled, 241 with negative test results, 0 pending, 4 positive; 2) 338 mule deer sampled, 330 negative, 0 pending, 8 positive; 3) 1078 white-tailed deer sampled, 1062 negative, 0 pending, 16 positive. All of our CWD positive animals continue to be found in the Black Hills or the surrounding Counties of Pennington, Custer and Fall River. In summary - since 1997, South Dakota has tested 23,154 wild, free ranging deer and elk and has found 168 cases of CWD (120 deer and 48 elk). South Dakota will continue work with other state, federal, and tribal agencies on the CWD issue within South Dakota, and on a national level. Testing will continue in areas where CWD has been found, and in areas where CWD may enter the state from surrounding states.

### **Mountain Lion Season Summary**

The South Dakota Game, Fish and Parks held the sixth regulated hunting season on mountain lions in 2011 since mountain lion hunting began in 2005. The season dates were January 1 – March 31, 2011. The harvest limit was set at 45 total lions with a sub-limit of 30 female lions. The season lasted for 52 days and a total of 47 lions (21 males and 26 females) were harvested. Three lions were checked in the last day of the season bringing the total harvest two over the harvest limit. Harvested lions ranged in age from 4 months to 7 years.

Mountain lion hunting was also held in Custer State Park in the Black Hills; the first regulated hunting opportunity for mountain lions within the park. The park issued 10 licenses and set a harvest limit of 5 lions. The season dates were January 1 – March 31. The harvest limit was not met and the season lasted until March 31. One female and one male lion were harvested.

### **Warm / Cool water Fish Culture**

Walleye production was compared in earthen and EPDM-lined ponds at Blue Dog Lake State Fish Hatchery. At a standard stocking density, there was no difference in the number of walleye raised in either pond type, although walleye growth and yield were greater in EPDM-lined ponds. For more information, please see the communication entitled "Walleye Fingerling Culture in Earthen and Ethylene Propylene Diene Monomer-Lined Ponds" in the North American Journal of Aquaculture 73:1-7, 2011.

Yellow perch egg viability was compared between three egg collection techniques; hand spawning (manually take eggs and fertilize, much like walleye spawning), cage spawning (collect eggs from cages that contain male and female yellow perch), and net spawning (collect eggs that are spawned on trap nets). Results indicate that hand spawning produced eggs with the highest viability (70%), while cage spawning was moderate (50%), and net spawning eggs had the lowest viability (30%).

A three step process was used to rear advanced fingerling largemouth bass for stocking into South Dakota waters. Phase 1 entailed spawning and growing bass extensively in drainable ponds. Phase 2 involved bringing age-0 bass into a raceway setting and transitioning to and growing on an artificial diet through the winter months. Phase 3 involved transferring age-1 bass into a drainable pond stocked with fathead minnows. The combination of the extensive and intensive techniques was effective at producing an advanced-sized largemouth bass product for stocking. For more information, please see the article entitled “Culture of Advanced-sized Largemouth Bass For Stocking Into South Dakota Impoundments” in the Proceedings of the South Dakota Academy of Science, Vol. 89, pgs. 181-191, 2010. Stocking evaluations are still being completed on these bass.

### **Asian Carp Research on Missouri River Tributaries Begins**

Researchers at South Dakota State University (Brian Graeb, Katie Bertrand, Cari-Ann Hayer, and Jessica Howell) are collaborating with SD Game, Fish and Parks to determine Asian carp distribution and potential effects on aquatic ecosystems. Specific objectives include to: 1) describing the distribution and trophic ecology of adult Asian carps in the Big Sioux, James, and Vermillion Rivers for the purpose of identifying potential niche overlap between Asian carps and native and desirable non-native sport fish in three Great Plains streams and examining the contribution of aquatic invasive species to the Missouri River, and 2) quantifying larval production and assessing the contribution of juvenile Asian carps from three major tributary systems to the Missouri River.

Asian carps (bighead, grass and silver carp) are aquatic invasive species that are gradually increasing in abundance in western North America, especially in the upper Missouri River basin. Adult bighead, grass, and silver carps are found in the Missouri River downstream of Gavin’s Point Dam and little is known about their current and potential distribution in Missouri River tributaries. The consequences of range expansion are poorly understood for Asian carps, particularly in the Great Plains ecosystem. Asian carps have the potential to affect the native riverine ecosystem and sport fisheries of these tributaries through direct competition and altered food web structure.

Asian carp distribution sampling was conducted during spring (May-June), summer (July-August) and fall (September-October) 2010 on the Big Sioux (3 sites), James (5 sites), and Vermillion (2 sites) rivers. Several sampling gears were used because no one gear is completely effective for capturing Asian carps. Methods included daytime boat electrofishing, mini-fyke nets, minnow traps, and large hoop nets. Five silver carp, three bighead carp, and two grass carp were collected from the James River and the Big Sioux River during summer and fall. Bighead and silver carp were collected at each of the three confluence sites and below Sioux Falls, South Dakota. An adult bighead carp was also collected in the James River near Mitchell. In addition, we collected the first juvenile bighead, and silver carps recorded from the James and Big Sioux Rivers in fall 2010. Muscle tissue and stomachs were preserved from each specimen to estimate relative trophic position and make comparisons with diet items. Otoliths, pectoral fins, and scales were also taken to estimate age.

The fish community was sampled concurrently with Asian carp distribution sampling. A total of 8,015 fishes (54 species) were collected at ten sites (May - October). In addition, invertebrates, algae, aquatic plants, and riparian plants were collected. Currently, these samples are being prepped for stable isotope analysis and will be used to compare isotope signatures among tributaries. Field work resumed in spring 2011 and included additional sampling gears (e.g. drifting gill net, trammel nets).

The role that Missouri River tributaries such as the Big Sioux, James, and Vermillion rivers play as spawning and nursery habitats for Asian carps is unknown. If Asian carps are reproducing in these tributaries, it may constitute an important source of Asian carps into the Missouri River population.

Larval samples were collected from mid-May to mid-October 2010 at the same sites described above. A larval drift net was deployed at all ten sites during 10 rounds of sampling. Flood events prevented sampling events at some sites, but a total of 76 sampling events yielded 227 replicates, of which 112 contained at least one larval fish. Approximately 506 total larval fish were collected, with the majority coming from June, July, and early August. Samples are in the process of being identified. Sampling effort for 2011 was increased by lengthening set times, increasing the number of sets per site, and expanding the sampling window to begin in April.

### **Missouri River Water Releases and Affects on Fisheries**

Releases from Missouri River reservoirs reached historic levels during spring 2011. Record inflows into the Missouri River from rain storms in Montana, Wyoming and the western Dakotas, and a mountain snowpack that was over 140% of normal forced the Corps to increase releases from the mainstem dams. Oahe Dam releases reached 85,000 cfs on May 28<sup>th</sup> and were forecasted to reach 150,000 cfs in early June with the realization they could go higher. The previous record release from Oahe Dam was approximately 70,000 cfs in 1997.

Rainbow smelt are the primary prey fish in Lake Oahe, South Dakota's largest Missouri River reservoir. In 1997, the previous high record runoff year, there were an estimated 550 million rainbow smelt lost through the Oahe Dam powerhouse. This estimate includes only a portion of total smelt loss, as more water was released from the dam's outlet works. A decline in rainbow smelt after 1997 contributed to a significant decline in the quality of the Lake Oahe fishery for over five years. Releases through the dam will be significantly higher in 2011, as will releases through the outlet works. Initial larval trawling results on Lake Oahe indicate that smelt had a good year of reproduction this Spring. Effects of high flows and flushing rates are a concern for all of South Dakota's Missouri River reservoirs, not only Lake Oahe.

Fish losses out of Oahe Dam will be estimated when it is safe to do so during 2011 but the impact on fish populations and recreational fisheries can not be determined until next year. Having information on smelt losses through Oahe Dam from 1997 to compare with data from 2011 will help increase the understanding of impacts of high releases at Oahe Dam on rainbow smelt and other fish.

It is expected that high releases will negatively affect fisheries resources in other Missouri River reservoirs, as well.

### **Construction Nears Completion on New Outdoor Learning Facility**

GFP purchased 33 acres just within the city limits of Rapid City for The Outdoor Campus-West and accompanying regional office headquarters. The education portion of the building will host classes and meetings, but will serve primarily as a gateway to the campus property for programs and activities.

GFP broke ground on the facility in early February of 2010. Construction continued throughout the year, and expected substantial completion date is June 1, 2011. The education staff will offer a variety of classes throughout the summer while construction of the interpretive exhibits continues.

Programming for the facility will be center on the Division's mission, along with the Core Concepts for Conservation Education approved by AFWA. Programs will be split amongst hunting, fishing, outdoor skills and outdoor education concepts.

Private fundraisers have contributed over \$1,000,000 to the project. Most of these donations are being used to finance purchase of an aquarium, taxidermy elements, and other portions of the interpretive exhibits.

### **Recruitment and Retention Coordinator in Place**

In an effort to understand and stem the decline of hunters and anglers, GFP has created a Recruitment and Retention Coordinator position within the Division of Wildlife. Jason Kool was hired in December of 2010 to fill this role.

Primary responsibilities for this position include understanding and working to reduce the churn rate among license purchasers, inventory and evaluation of recruitment programs and strategies, and working with GFP educators and information staff to identify target audiences for educational programs, recruitment events and marketing materials.

### **Work Completed on Cooperative Interpersonal Communication Skills Training Program for Conservation Officers**

Over the past 3 years, the Division of Wildlife has cooperated with 14 other state wildlife agencies and 3 conservation law enforcement associations in the development of an interpersonal communications skills training program for conservation law enforcement officers. In October 2010 the final training DVDs were delivered to all participating entities by the project development contractor and Executive Director of IMPACT, Randy Means of Thomas and Means, LLP.

The core concept of this interpersonal communication skills program is to recognize the criticality of communications skills in conservation law enforcement work. This communications training program provides conservation law enforcement supervisors, staff trainers and administrators with a validated, interpersonal communication skills training and officer performance evaluation program that will aid field officers in their daily interactions with the diverse group of citizens they serve. The IMPACT Project identifies specific performance criteria and standards for officer-citizen communication, develops correlated evaluation tools for use by field supervisors and training staff, and creates an associated coaching and remediation program for conservation officers.

States that are interested in learning more about the IMPACT – Conservation Law Enforcement Edition product are encouraged to contact Greg Seidel, Director of Training for Thomas and Means, LLP, by

email at: [seidelg@comcast.net](mailto:seidelg@comcast.net) or by phone at: 804-400-5869.