

# WEST VIRGINIA RIVER OTTER BRIDGE SURVEY

2010



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## **WEST VIRGINIA RIVER OTTER BRIDGE SURVEY - 2010**

West Virginia's 2010 bridge survey for river otter sign was conducted during the latter part of January through April. A 600-meter stretch, both upstream and/or downstream, at 108 bridges across the state were surveyed. Personnel from all districts participated.

### **Otter Sign**

Otter sign was again detected at almost twice the number of bridges as reported in the 2004 survey (Table 1). Otter sign was observed at 29 of 108 bridges (27%) which was lower than last year. The most otter sign, as a percent of bridges surveyed, was observed in District 3 (46%). District 6 (43%) and District 4 (40%) also showed good detection of sign at bridges. Districts 2 and 5 were up from last year, while District 1 showed a slight decrease. Although detection was still good it has again decreased from last year, perhaps significantly again, in District 4.

Although independent reported observations indicate otter presence in most counties and drainages of the state, bridge surveys seem to indicate lack of otter presence in southwestern county drainages; the Monongahela, West Fork, Tygart, and Cheat drainages in the north-central counties; and the northern portion of the Potomac drainage in the eastern panhandle (Figures 1 & 2). It is possible that pH and other pollution issues may be continuing to have an impact on otter occupation of these portions of the state.

Occupied range appears to be well-utilized by otters. Reports of otter damage to private and state run fish hatchery operations have increased in recent years as have observations. Otter have been observed or collected in all but 8 of West Virginia's 55 counties (Figure 3). Most of these counties are in the southwestern portion of West Virginia and in the northern panhandle and include Boone, Brooke, McDowell, Mercer, Mineral, Ohio, Wayne, and Wetzel Counties.

### **Other Furbearer Sign**

Beaver sign was again recorded at the bridges surveyed (Table 2). In 2010, beaver sign was observed at 30% of bridges. This is down from previous survey years which were 34% last year, 37% in 2008, 46% in 2004, 43% in 2003, and 51% in 2002. Beavers were most common in the eastern panhandle and mountain counties. The only districts reporting more beaver sign than previous years were Districts 1 and 3.

Muskrat and mink sign observations remain similar to previous years statewide (Table 3). Raccoon sign was down in all but District 6.

## Summary

Recent research has shown that bridge surveys are of no value in determining abundance of otters. The same research has validated that such surveys are good tools for determining simple presence/absence of otters. The current survey is the sixth one conducted in the past nine years.

Otter trapping seasons are now in effect in three states bordering West Virginia: Kentucky, Ohio, and Virginia. Data from all of these states indicate no adverse impacts to otter populations in spite of, in some cases, fairly liberal bag limits and seasons.

The Wildlife Resources Section of the West Virginia Division of Natural Resources has proposed a statewide otter trapping season for the 2011-2012 season. The yearly bag limit will be one otter and the season will run from the first Saturday in November through the end of February. Mandatory checking at an official game checking station will be in force. The proposal received a favorable response from people (84% of individuals and 82% of clubs) sending in comments after the Division's spring open house meetings in March, 2010.

A population model using measured reproductive rates from West Virginia otters, and conservative survival parameters from published research results in similar habitats indicate that West Virginia's otter population can easily sustain a yearly harvest under the proposed framework. With a limited harvest, the otter population will continue to spread into unoccupied drainages and increase in densities throughout most of the state.

Once the season is approved, CITES export authority will be pursued to assure legal sale of pelts on the international market. Guidelines will be published instructing trappers on how to avoid catching otters if they so desire. Additionally, otter bridge survey data will cease to be collected. Data needs will be met by collection of harvest data on a yearly basis.

Table 1. Number of bridges by county in each district along with presence of otter sign and percent of number of bridges with otter sign present in 2010.

| District 1 | Bridges | Otter Sign | Percent |
|------------|---------|------------|---------|
| Barbour    | 3       | 1          | 33      |
| Brooke     | 2       | 0          | 0       |
| Hancock    | 2       | 0          | 0       |
| Harrison   | 3       | 0          | 0       |
| Marion     | 2       | 0          | 0       |
| Marshall   | 3       | 0          | 0       |
| Monongalia | 2       | 0          | 0       |
| Ohio       | 1       | 0          | 0       |
| Preston    | 2       | 0          | 0       |
| Taylor     | 1       | 0          | 0       |
| Tucker     | 5       | 1          | 20      |
| Wetzel     | 2       | 0          | 0       |
| Total      | 28      | 2          | 7       |

| District 2 | Bridges | Otter Sign | Percent |
|------------|---------|------------|---------|
| Berkeley   | 3       | 1          | 33      |
| Grant      | 2       | 0          | 0       |
| Hampshire  | 6       | 2          | 33      |
| Hardy      | 3       | 2          | 66      |
| Jefferson  | 2       | 1          | 50      |
| Mineral    | 2       | 0          | 0       |
| Morgan     | 2       | 1          | 50      |
| Pendleton  | 3       | 0          | 0       |
| Total      | 23      | 7          | 30      |

| District 3 | Bridges | Otter Sign | Percent |
|------------|---------|------------|---------|
| Braxton    | 1       | 1          | 100     |
| Clay       | 3       | 0          | 0       |
| Lewis      | 1       | 0          | 0       |
| Nicholas   | 1       | 0          | 0       |
| Pocahontas | 3       | 3          | 100     |
| Randolph   | 0       | 0          | 0       |
| Upshur     | 2       | 0          | 0       |
| Webster    | 2       | 2          | 100     |
| Total      | 13      | 6          | 46      |

| District 4 | Bridges | Otter Sign | Percent |
|------------|---------|------------|---------|
| Fayette    | 1       | 0          | 0       |
| Greenbrier | 8       | 5          | 63      |
| McDowell   | 1       | 0          | 0       |
| Mercer     | 1       | 0          | 0       |
| Monroe     | 0       | 0          | 0       |
| Raleigh    | 1       | 0          | 0       |
| Summers    | 0       | 0          | 0       |
| Wyoming    | 3       | 1          | 33      |
| Total      | 15      | 6          | 40      |

| District 5 | Bridges | Otter Sign | Percent |
|------------|---------|------------|---------|
| Boone      | 1       | 0          | 0       |
| Cabell     | 2       | 0          | 0       |
| Kanawha    | 7       | 0          | 0       |
| Lincoln    | 1       | 1          | 100     |
| Logan      | 2       | 1          | 50      |
| Mason      | 0       | 0          | 0       |
| Mingo      | 0       | 0          | 0       |
| Putnam     | 1       | 0          | 0       |
| Wayne      | 1       | 0          | 0       |
| Total      | 15      | 2          | 13      |

| District 6 | Bridges | Otter Sign | Percent |
|------------|---------|------------|---------|
| Calhoun    | 2       | 1          | 50      |
| Doddridge  | 1       | 0          | 0       |
| Gilmer     | 3       | 2          | 66      |
| Jackson    | 1       | 0          | 0       |
| Pleasants  | 0       | 0          | 0       |
| Ritchie    | 3       | 1          | 33      |
| Roane      | 0       | 0          | 0       |
| Tyler      | 1       | 0          | 0       |
| Wirt       | 3       | 2          | 66      |
| Wood       | 0       | 0          | 0       |
| Total      | 14      | 6          | 43      |

Table 2. Beaver sign observed on bridge surveys in 2010.

| District | # Bridges | Beaver Sign | % Bridges |
|----------|-----------|-------------|-----------|
| 1        | 28        | 9           | 32        |
| 2        | 23        | 6           | 26        |
| 3        | 13        | 7           | 54        |
| 4        | 15        | 6           | 40        |
| 5        | 15        | 3           | 20        |
| 6        | 14        | 1           | 7         |
| Total    | 108       | 32          | 30        |

Table 3. Raccoon, muskrat, and mink sign observed at bridge surveys in 2010.

| District | Raccoon Sign | % Bridges | Muskrat Sign | % Bridges | Mink Sign | % Bridges |
|----------|--------------|-----------|--------------|-----------|-----------|-----------|
| 1        | 15           | 54        | 12           | 43        | 2         | 9         |
| 2        | 15           | 65        | 2            | 9         | 12        | 52        |
| 3        | 8            | 62        | 6            | 46        | 2         | 15        |
| 4        | 8            | 53        | 0            | 0         | 3         | 20        |
| 5        | 11           | 73        | 5            | 33        | 3         | 20        |
| 6        | 11           | 79        | 0            | 0         | 4         | 29        |
| Total    | 68           | 63        | 25           | 23        | 26        | 24        |