

## Creel and Lake Information

### Lake Information

**Lake Name:** Horsethief  
**Lake Code:** MCS-Lake-8-000  
**Surface Area:** 6.89 Hectares  
**County:** Pennington  
**Start Date:** 1/3/2019  
**End Date:** 3/21/2019  
**Months Included:** January, February, March, May, June, July, August, September

Table 1. Percent of angling parties interviewed primarily targeting a species (or any species) by month and overall for Horsethief during 2018 - 2019. Any Species (ANY), Rainbow Trout (RBT).

| Year | Month     | # of Interviews | Percent of Anglers Targeting |       |
|------|-----------|-----------------|------------------------------|-------|
|      |           |                 | ANY                          | RBT   |
| 2018 | May       | 24              | 62.5                         | 20.8  |
|      | June      | 45              | 37.8                         | 51.1  |
|      | July      | 74              | 43.2                         | 48.6  |
|      | August    | 42              | 76.2                         | 21.4  |
|      | September | 26              | 50.0                         | 46.2  |
|      | Overall   | 211             | 51.7                         | 40.3  |
| 2019 | January   | 7               | 57.1                         | 42.9  |
|      | February  | 1               | 0.0                          | 100.0 |
|      | March     | 4               | 25.0                         | 75.0  |
|      | Overall   | 12              | 41.7                         | 58.3  |

Table 2. Monthly and overall number of interviews, angler hours, angler days, mean trip length, mean party size, percent of parties interviewed that were South Dakota residents, percent of angling activity from a boat or shack and percent of angling activity that occurred on weekends and holidays at Horsethief (80% confidence interval).

| Year      | Month     | # Interviews | Angler Hours      | Angler Days | Trip Length (h) | Party Size     | % SD Residents | % Boat or Shack | % Weekend/Holidays |
|-----------|-----------|--------------|-------------------|-------------|-----------------|----------------|----------------|-----------------|--------------------|
| 2018      | May       | 24           | 3,345<br>(1,535)  | 1,859       | 1.80            | 2.40           | 62.50          | 0               | 67                 |
|           | June      | 45           | 2,609<br>(891)    | 929         | 2.81            | 2.40           | 64.44          | 0               | 31                 |
|           | July      | 74           | 7,862<br>(3,634)  | 3,971       | 1.98<br>(0.38)  | 3.66<br>(0.86) | 71.62          | 5               | 58                 |
|           | August    | 42           | 1,610<br>(590)    | 660         | 2.44<br>(0.57)  | 2.78<br>(0.70) | 69.05          | 7               | 36                 |
|           | September | 26           | 2,569<br>(614)    | 962         | 2.67            | 3.83           | 73.08          | 8               | 19                 |
|           | Overall   | 211          | 17,996<br>(4,133) | 7,724       | 2.33<br>(0.14)  | 3.01<br>(0.22) | 68.72          | 4               | 44                 |
| 2018-2019 | January   | 7            | 0                 | 0           | 2.79            | 2.42           | 71.43          | 0               | 14                 |
|           | February  | 1            | 0                 |             | 0.00            | 2.00           | 100.00         | 0               | 0                  |
|           | March     | 4            | 0                 | 0           | 2.44            | 2.00           | 75.00          | 0               | 25                 |
|           | Overall   | 12           | 0                 | 0           | 2.65            | 2.16           | 75.00          | 0               | 17                 |

Table 3. Estimated fishing pressure (angler hours) by month during the summer season 2019 daylight period on Horsethief (80% confidence interval).

| Lake                    | Month |
|-------------------------|-------|
|                         | Total |
| Horsethief (Pennington) | 0     |

Table 4. Estimated number of fish harvested, by species and month, for the summer season 2019 daylight period on Horsethief (80% confidence interval).

| Species       | Month |
|---------------|-------|
|               | Total |
| Rainbow Trout | 0     |
| Total         | 0     |

Table 5a. Estimated monthly and overall angler catch rate per hour fished (C/h) for all anglers by species at Horsethief (80% confidence interval). Abbreviations for species are as follows: Rainbow Trout (RBT) and other species (Other).

| Year     | Month         | RBT            |
|----------|---------------|----------------|
|          |               | C/h            |
| 2018     | May           | 0.30<br>(0.28) |
|          | June          | 0.64<br>(0.52) |
|          | July          | 0.58<br>(0.38) |
|          | August        | 0.54<br>(0.45) |
|          | September     | 0.53<br>(0.19) |
|          | Overall       | 0.53<br>(0.19) |
|          | 2018-<br>2019 | January        |
| February |               | 0.00           |
| March    |               | 0.00           |
| Overall  |               | 0.00           |

Table 5b. Estimated monthly and overall angler harvest rate per hour fished (H/h) for all anglers by species at Horsethief (80% confidence interval). Abbreviations for species are as follows: Rainbow Trout (RBT) and other species (Other).

| Year     | Month         | RBT            |
|----------|---------------|----------------|
|          |               | H/h            |
| 2018     | May           | 0.13<br>(0.14) |
|          | June          | 0.30<br>(0.27) |
|          | July          | 0.17<br>(0.12) |
|          | August        | 0.25<br>(0.29) |
|          | September     | 0.16<br>(0.05) |
|          | Overall       | 0.19<br>(0.07) |
|          | 2018-<br>2019 | January        |
| February |               | 0.00           |
| March    |               | 0.00           |
| Overall  |               | 0.00           |

Table 6a. Estimated monthly and overall angler catch rate per hour fished (C/h) only for anglers primarily targeting a species at Horsethief. (80% confidence interval). Abbreviations for species are as follows: Rainbow Trout (RBT) and Other Species (Other).

| Year     | Month         | RBT            |
|----------|---------------|----------------|
|          |               | C/h            |
| 2018     | May           | 0.21<br>(0.29) |
|          | June          | 0.93<br>(1.51) |
|          | July          | 0.56<br>(0.65) |
|          | August        | 0.80<br>(0.69) |
|          | September     | 0.50<br>(0.56) |
|          | Overall       | 0.60<br>(0.37) |
|          | 2018-<br>2019 | January        |
| February |               | 2.53           |
| March    |               | 0.46<br>(0.46) |
| Overall  |               | 1.39<br>(0.57) |

Table 6b. Estimated monthly and overall angler harvest rate per hour fished (H/h) only for anglers primarily targeting a species at Horsethief. (80% confidence interval). Abbreviations for species are as follows: Rainbow Trout (RBT) and Other Species (Other).

| Year     | Month         | RBT            |
|----------|---------------|----------------|
|          |               | H/h            |
| 2018     | May           | 0.00           |
|          | June          | 0.40<br>(1.07) |
|          | July          | 0.26<br>(0.29) |
|          | August        | 0.58<br>(0.71) |
|          | September     | 0.12<br>(0.15) |
|          | Overall       | 0.27<br>(0.26) |
|          | 2018-<br>2019 | January        |
| February |               | 0.58           |
| March    |               | 0.21<br>(0.46) |
| Overall  |               | 0.37<br>(0.18) |



Table 7a. Estimated monthly and overall angler catch (C) for all anglers by species at Horsethief (80% confidence interval). Abbreviations for species are as follows: Rainbow Trout (RBT) and other species (Other).

| Year     | Month         | RBT              |
|----------|---------------|------------------|
|          |               | C                |
| 2018     | May           | 988<br>(715)     |
|          | June          | 1,667<br>(745)   |
|          | July          | 4,569<br>(2,217) |
|          | August        | 866<br>(392)     |
|          | September     | 1,359<br>(353)   |
|          | Overall       | 9,450<br>(2,502) |
|          | 2018-<br>2019 | January          |
| February |               | 0                |
| March    |               | 0                |
| Overall  |               | 0                |

Table 7b. Estimated monthly and overall angler harvest (H) for all anglers by species at Horsethief (80% confidence interval). Abbreviations for species are as follows: Rainbow Trout (RBT) and other species (Other).

| Year     | Month         | RBT            |
|----------|---------------|----------------|
|          |               | H              |
| 2018     | May           | 447<br>(433)   |
|          | June          | 770<br>(337)   |
|          | July          | 1,333<br>(730) |
|          | August        | 405<br>(247)   |
|          | September     | 401<br>(108)   |
|          | Overall       | 3,357<br>(952) |
|          | 2018-<br>2019 | January        |
| February |               | 0              |
| March    |               | 0              |
| Overall  |               | 0              |

Table 8. Estimated number and rate (number per hour) of Rainbow Trout (RBT) caught and harvested by anglers during the summer and winter fisheries on Horsethief, (80% confidence interval).

**Rainbow Trout**

| Season | Year      | Catch            | Harvest        | Catch Rate     | Harvest Rate   |
|--------|-----------|------------------|----------------|----------------|----------------|
| Summer | 2014      | 0                | 0              | 0.00           | 0.00           |
| Summer | 2015      | 1,075<br>(321)   | 746<br>(286)   | 0.20<br>(0.13) | 0.14<br>(0.11) |
| Summer | 2018      | 9,450<br>(2,502) | 3,357<br>(952) | 0.53<br>(0.19) | 0.19<br>(0.07) |
| Winter | 2018-2019 | 0                | 0              | 0.00           | 0.00           |

Table 9. The number of fish harvested with each species by length group (mm) for the winter and summer fisheries at Horsethief. Abbreviations for species are as follows: Rainbow Trout (RBT).

| <b>Summer 2018</b>      |                |
|-------------------------|----------------|
| Length Group (mm)       | RBT<br>(N=341) |
| 140                     | 1              |
| 150                     |                |
| 160                     | 1              |
| 170                     | 4              |
| 180                     | 4              |
| 190                     | 6              |
| 200                     | 4              |
| 210                     | 9              |
| 220                     | 4              |
| 230                     | 5              |
| 240                     | 9              |
| 250                     | 13             |
| 260                     | 35             |
| 270                     | 48             |
| 280                     | 45             |
| 290                     | 45             |
| 300                     | 47             |
| 310                     | 32             |
| 320                     | 13             |
| 330                     | 9              |
| 340                     | 3              |
| 350                     | 3              |
| 360                     | 1              |
| <b>Winter 2018-2019</b> |                |
| Length Group (mm)       | RBT<br>(N=8)   |
| 190                     | 1              |
| 200                     | 2              |
| 210                     | 1              |
| 220                     | 1              |
| 230                     |                |
| 240                     | 1              |
| 250                     |                |
| 260                     |                |
| 270                     | 1              |
| 280                     |                |
| 290                     |                |
| 300                     | 1              |

Figure 1a. Length frequency of angler-harvested Rainbow Trout measured by the creel clerk during creel surveys on Horsethief.

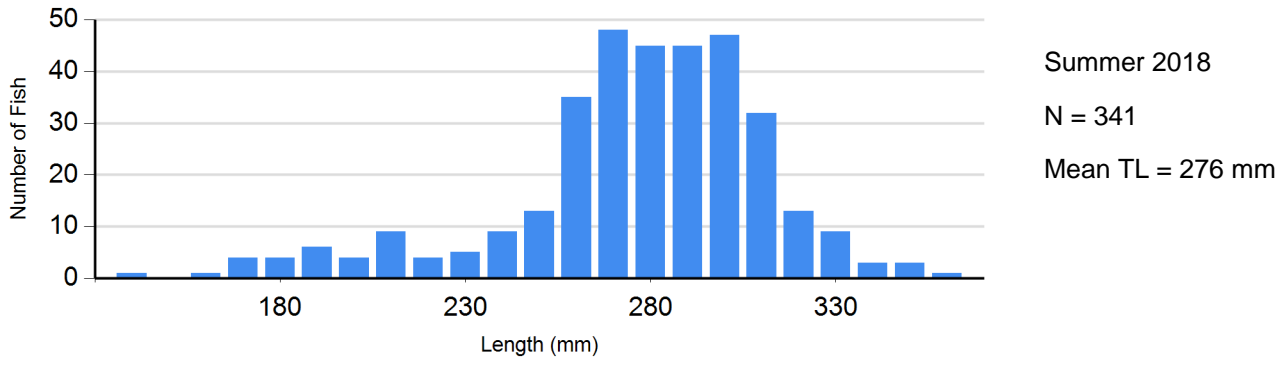


Figure 2. South Dakota county of residence for winter and summer resident anglers fishing Horsethief, South Dakota between May 2018 and March 2019.

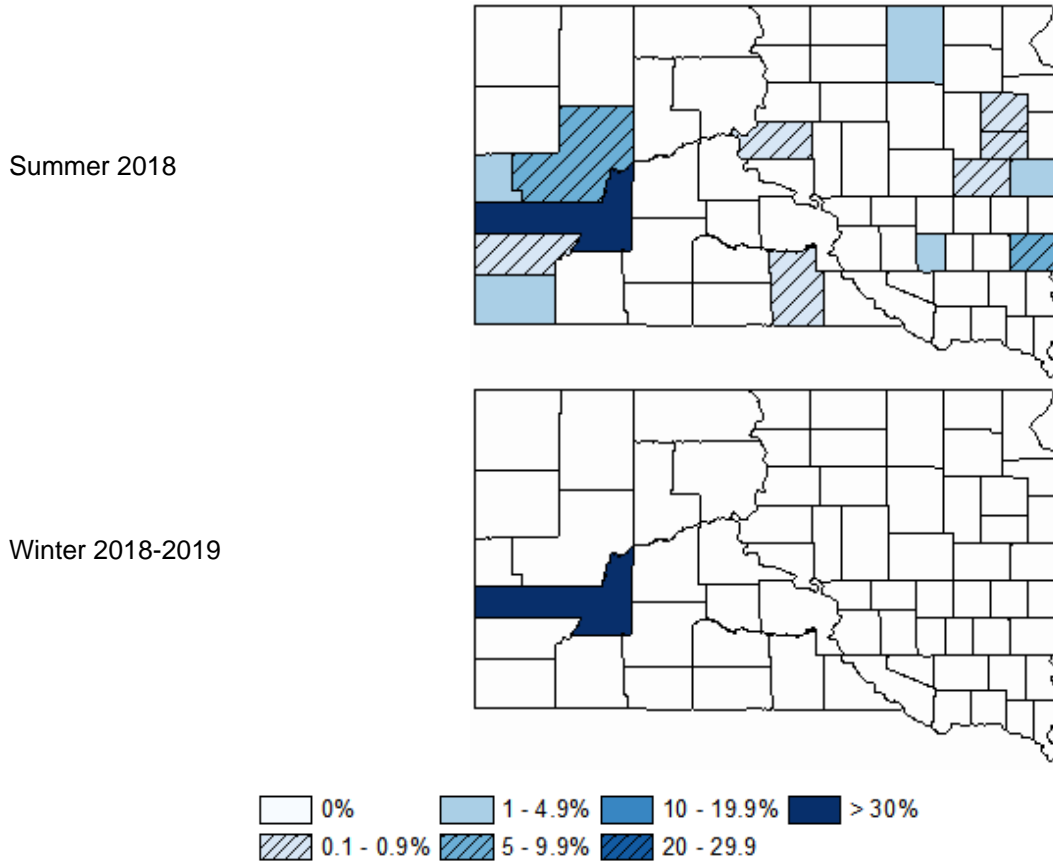


Table 10. Number of parties interviewed that harvested (or caught) a specified number of fish totaled over selected strata for a species.

| Summer 2018<br>Angler Harvest | Counts         |
|-------------------------------|----------------|
|                               | RBT<br>(n=211) |
| 0.00                          | 137            |
| 0.10                          | 1              |
| 0.25                          | 2              |
| 0.33                          | 3              |
| 0.50                          | 8              |
| 0.60                          | 3              |
| 0.67                          | 3              |
| 0.75                          | 2              |
| 1.00                          | 8              |
| 1.25                          | 1              |
| 1.33                          | 4              |
| 1.50                          | 2              |
| 1.67                          | 3              |
| 1.71                          | 1              |
| 1.75                          | 1              |
| 2.00                          | 9              |
| 2.50                          | 2              |
| 3.00                          | 2              |
| 3.33                          | 4              |
| 3.75                          | 1              |
| 4.00                          | 4              |
| 4.50                          | 3              |
| 5.00                          | 6              |
| 7.00                          | 1              |

| <b>Winter 2018-2019</b> | Counts     |
|-------------------------|------------|
| Angler Harvest          | RBT (n=12) |
| 0.00                    | 8          |
| 1.00                    | 1          |
| 1.50                    | 2          |
| 3.75                    | 1          |



Table 11 The number (N) and percent of total interviews in supplemental-response categories by question asked during interviews at Horsethief.

Question: What is the method of angling?

| Response | Summer 2018<br>(n = 210) |
|----------|--------------------------|
| Bait     | 80%                      |
| Fly      | 1%                       |
| Spin     | 19%                      |

Question: Considering all factors, how satisfied are you with your fishing trip today?

| Response                | Summer 2018<br>(n = 210) |
|-------------------------|--------------------------|
| Very Satisfied          | 54%                      |
| Moderately Satisfied    | 29%                      |
| Slightly Satisfied      | 8%                       |
| Neutral/No Opinion      | 3%                       |
| Slightly Dissatisfied   | 5%                       |
| Moderately Dissatisfied | 1%                       |

Question: How many trout did you release today that swallowed the hook?

| Response | Summer 2018<br>(n = 210) |
|----------|--------------------------|
| >5       | 2%                       |
| 0        | 90%                      |
| 1        | 6%                       |
| 2        | 2%                       |
| 3        | 0%                       |

Question: For the released fish in the previous question, how many fish did you release by cutting your line?

| Response | Summer 2018<br>(n = 210) |
|----------|--------------------------|
| >5       | 1%                       |
| 0        | 95%                      |
| 1        | 3%                       |
| 3        | 0%                       |

Question: Are you camping at the lake?

| Response | Summer 2018<br>(n = 210) |
|----------|--------------------------|
| No       | 96%                      |
| Yes      | 4%                       |