- Using spreadsheet for age-structured models from Dr. Mike Allen’s workshop at Catfish 2020.

- Age structured models were created for each population.

- Each population had unique von Bertalanffy growth parameters, a/b for weight at length, and annual mortality (AM).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Impoundment | Linf | K | t0 | a | b | AM |
| MILR | 1170 | 0.062 | -1.521 | -6.42937 | 3.50897 | 28.11 |
| ELDR | 720 | 0.119 | -0.955 | -6.09925 | 3.40576 | 7.50 |
| TCRR | 950 | 0.245 | 0.539 | -6.28742 | 3.48093 | 43.98 |
| WLFC | 1070 | 0.105 | -0.981 | -5.43000 | 3.15770 | 28.75 |

- no\_length represents a 15-inch minimum length limit.

- protected\_slot represents a 25 to 35-inch protected slot length limit.

- maximum represents zero harvest of fish over 30 inches.

- In all instances, we assumed natural mortality to be 1.5\*K (Jensen equation).

- Modeled SPR (ratio of number of eggs in system when fished compared to unfished) at exploitation rates up to 0.38.

- Modeled yield per recruit at exploitation rates up to 0.38.

- Standard deviation for mean length at age was set at 38 mm for all simulations

- Set age at maturity to age-6.

* Used homemade spreadsheet to see how recruits get to 30”.
* Big fish models were created for each population with the same assumptions as above.