PART 1: INTERVIEW (200 POINTS)

Note: Each question should be scored 10, 5, 2, or 0.

1. What is the product of fisheries management?

10- the opportunity to go fishing and/or catch fish

5- something about conservation with some mention of fishing

2- resource conservation with no mention of fishing

1. Explain the difference in accuracy and precision.

10- Accuracy is the nearness of a measurement to the actual value of the variable being measured. Precision refers to the closeness to each other of repeated measurements of the same quantity.

5- Something close, possibly describing the common bulls-eye illustration without specifically answering the question

1. What is gear selectivity and what are some factors that might affect it?

10- the bias of a sample obtained with a given gear. Selectivity may occur for species, sizes, sex, etc. Factors affecting may be gear design or gear deployment (location, depth, time, season, etc.).

5- some of the above

2- little of the above

1. How would you determine the appropriate number of samples to collect to obtain an estimate of a population parameter such as catch per unit effort?

10- use a sample size formula with inputs for known or expected variation (CV) and predetermined alpha level (could also mention percent tolerable deviation); also could say the incremental approach using historical data

5- some of the above but not a thorough answer

2- displays some knowledge of sample size calculations, at least in principle

1. What are the three parameters of a von Bertalanffy model that can be estimated from length-at-age data? What do each of the three describe?

10- L∞ = asymptotic length of the fish; k = growth coefficient; t0 = time when length would theoretically be 0

5- can list the 3 parameters but not what they describe

2- demonstrates some knowledge of the VB model but not the model parameters

1. Describe the two major types of creel surveys? How would you decide which one to use?

10- Access point and roving. Generally would use an access point survey when there are few access points to the fishery and would use a roving creel when there are many access points. Other distinctions may be acceptable.

5- can name the 2 types but doesn’t know how to pick one or gives a weak answer for how to pick one

2- displays limited knowledge of creel surveys

1. In statistics, what are 3 commonly used measures of dispersion?

10- any 3 of the following: variance, standard deviation, standard error, coefficient of variation, range, interquartile range, relative standard error

5- 2 of the above

2- 1 of the above

1. What is meant by statistical power? How is that useful in fisheries sampling?

10- the probability of not committing a type-2 error (1-β) OR the probability of obtaining a statistically significant result given a true effect actually occurs; if power is too low, we have little chance of detecting a significant change in a population parameter, sample sizes need to be high enough to increase power

5- some of the above

2- little of the above

1. If I collected repeated samples of cholophyl-a from 4 similar lakes over a 3 year period and wanted to determine if the values were significantly different among lakes, how would I do that?

10- use a repeated measures analysis of variance; look at overlap in confidence intervals

5- use an analysis of variance

2- displays limited knowledge of statistical methods that could be used in this scenario

1. How does stock size affect recruitment?

10- recruitment increases as stock size increases to a point and then levels off or declines depending on the level of density dependence of the species and/or habitat quality

5- some of the above

2- knows some principles affecting recruitment just not specific to this question

1. Under what circumstances would you propose the implementation of a minimum length limit on a largemouth bass population?

10- fast growth, high fishing mortality, low or variable recruitment, low natural mortality

5- some of the above OR when you think a population is being overharvested

2- a little of the above

1. Describe the importance of the floodplain of a river ecosystem.

10- spawning and/or nursery habitat for some species, allochtonous material (or energy) input, slows the flow

5- one of the above

2- displays some limited knowledge of floodplain river ecosystems without specifically mentioning the things listed above

1. Describe your experience with GIS and/or statistical packages such as SAS or Program R. Are there any other specialized software types that you are familiar with that you think will help you perform this job?

10- much experience with GIS AND statistical software

5- much experience with either GIS or statistical software

2- little experience with at least one of the two

Note: points may be given for additional RELEVANT software knowledge

1. What sampling gear(s) would you use to collect adults of the following species: largemouth bass, crappie, catfish?

10- largemouth bass (electrofishing); crappie (trap nets, electrofishing, trawls, other nets?); catfish (low-frequency EF, tandem-baited HN, set lines, gill nets)

5- some of the above

2-little of the above

1. Your sampling data show a mean relative weight of 80 for crappie between 250 and 350 mm. What does that tell you? Is there any management action that you would need to take?

10- the crappie are in relatively poor condition, there is a lack of forage for that size group of fish, there are too many fish in that size group. Potential management actions may include liberalizing harvest regulations to encourage more harvest, fertilization to increase primary production, stocking shad or other forage

5- some of the above

2- little of the above

1. Name 5 boat/trailer/outboard motor routine maintenance tasks and describe your experience with each?

Possible Answers: Grease axle bearings, check trailer wiring, check trailer tire air pressure, grease motor steering, winterize motor, change lower-unit oil, change engine motor oil (4-cycle engines), charge batteries, check fuel level.

10- name 5 and have some experience

5-name 5 and have no/limited experience or name at least 3 and have experience

2- name at least 3 with no/limited experience

1. Working directly with the public is becoming increasingly more important. What are some strategies that you have used to successfully interact with the public to achieve some desired outcome? (NOTE: Follow up with what strategies should be used if no real world experience available.)

10- much experience with proper methods used

5- little or no experience but knows proper methods

2- much experience but questionable methods

1. What are some of the fish population metric input data that are used for fish population simulation models such as Fisheries Analysis and Simulation Tools (FAST) and Fisheries Analysis and Modeling Simulator (FAMS)? How have you used models related to fish and aquatic resources during past projects?

10- demonstrates familiarity with models; knows inputs include VB growth parameters, mortality rates, length-weight regression slope and intercept, etc.; has some experience at least academically

5- demonstrates limited familiarity with this type of model OR has used other types of models (e.g. Ecosim, Aquatox, etc.) and seems to have a good grasp of modeling in general

2- knows what a population simulation model is and not much else

1. I am going to give you a hypothetical scenario; tell me how you would respond. Lake “X” is a popular fishing lake for both largemouth bass (LMB) and hybrid striped bass (HSB). A local LMB club asks you to stop stocking HSB because they believe that either HSB eat LMB outright or compete directly for food resources. What information do you need to collect before moving forward with a recommendation to your boss?

10- any combination of: Wr’s for both species, prey abundance estimates, HSB diet analyses AND some mention of angler data (catch, effort, harvest, attitudes, preferences, etc.)

5- Either biological or human dimensions answers mentioned above

2- a limited amount of the above

1. Why do you want this job and what special skills do you think you can bring to District 6 to complement the existing AGFC Fisheries Division? (Why should I hire you?)

10-

5-

2-

1. Are you willing to live within 50 miles of the Camden Regional Office? Do you have any concerns about working in inclement weather conditions, and, at times, hours that are outside of the traditional 8am-5pm job? Can you operate a boat and back a trailer down a boat ramp?

Not scored- PASS OR FAIL

Part 1 Score \_\_\_\_\_\_\_\_ (Total points possible = 200)

PART II: Oral Presentation (35 POINTS)

1. Presenter Appearance (5 points total)
   1. Button-down shirt, tie, appropriate slacks or equivalent for ladies (5 points)
   2. Button-down shirt, appropriate slacks or equivalent for ladies (3 points)
   3. Any other ensemble (0 points)
2. Quality of presentation (25 points total)
   1. Good grasp of scientific material, easily understood at all levels, excellent graphics, excellent communicator (25 points)
   2. Quality of presentation includes a mix of characteristics from “a” and “c” (20 points)
   3. Some problems with grasp of the scientific material, some difficulty for audience to understand, graphics could use improvement, moderate communicator (15 points)
   4. Quality of presentation includes a mix of characteristics from “c” and “e” (10 points)
   5. Significant problems with grasp of the scientific material, difficult for audience to understand, graphics could use improvement or poor graphics, poor communicator (5 points)
3. Time (5 points total); Presentation portion only, does not include time for questions
   1. 9-11 minute presentation (5 points)
   2. 6-8 minute presentation (3 points)
   3. 1-5 minute presentation OR longer than 11 minutes (1 point)

PART II: SCORE\_\_\_\_\_\_\_\_ (Total points possible = 35)

PART III: Skills Test (35 POINTS)

1. Writing skills test (35 points)

PART III: SCORE\_\_\_\_\_\_\_\_ (Total points possible = 35)

PART IV: Application Review & Interview Panel Discussion (30 POINTS)

Additional Interview Panel comment regarding the value of the applicant’s skill set relative to the position. This includes a review of the applicant’s application and any other relevant topics that occurred during the actual interview process.

PART IV: SCORE\_\_\_\_\_\_\_\_ (Total points possible = 30)

TOTAL APPLICANT SCORE (300 POSSIBLE POINTS)

FINAL SCORE = \_\_\_\_\_\_\_\_\_\_\_\_

Writing Skills Test (35 Points):

Your predecessor conducted an electrofishing sample on J.D. Neely’s 10-acre private pond on May 11. The only data he left you were size structure indices, where largemouth bass PSSQ (formerly known as PSD) was 25 and bluegill PSSQ was 60. He also left you a note that Mr. Neely stocked the pond at the appropriate rates about 10 years ago, he regularly adds lime, fertilizes each spring by the book, and has a feeder that he maintains with sport fish feed during warmer months. Please draft a brief letter to Mr. Neely with your evaluation and management recommendations based on the information you were given. Print 4 copies of the letter and save the document on the desktop with your name as the file name.

Scoring:

*Technical* (10 points)-

10 points- something about asking the pond owner what his goals are or giving him multiple

options such as balanced vs trophy bream, etc. Diagnose the pond as bass crowded and tell

how to accomplish each of the options listed above.

7 points- diagnose the pond as bass crowded and recommend increased harvest to bring the

pond into balance (writer assumes balance is the only option)

3 points- incomplete diagnosis or recommendations but not totally incorrect

*Quality of Writing* (25 points)-

25- Near perfect with no (or only very minor) typos and well worded.

15- Well worded with a few typos

10- Poorly worded with minimal typos

5- Poorly worded with numerous typos

0- Completely unacceptable for a professional position