



Job Application and Interview Guide

2023 Annual Meeting

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A student's guide to the job application and interview process

Applying for jobs can be a daunting, even confusing experience. Many students have never applied for a professional fisheries/wildlife job, and therefore don't know where to start when looking for jobs, developing their application package, and preparing for an interview. This reference guide was developed to help you through the process: from where to look for job announcements, to writing a compelling cover letter, putting together a top-notch resume, and learning how to handle the interview process like a true professional. I would like to give a special thanks to Robert Hand an Idaho Game and Fish Employee for constructing the original interview guide for the Idaho Chapter of the American Fisheries Society.

We hope you find this guide helpful, and wish you the best of luck in your job search!



Conducting a standard survey on Johnson Lake near Orr, MN.

More information

A PDF version of this guide can be found on the Minnesota Chapter AFS website at:



MINNESOTA CHAPTER



Step 1: The Job Search

The first step towards a job is usually a Job Search. This involves finding suitable job announcements on the internet, school job boards, and especially personal communication with professionals.

Here is a list of job resources to help you get started!

- American Fisheries Society - <https://fisheries.org>
- Federal Jobs (USFWS, USFS, etc) - <https://www.usajobs.gov>
- Texas A&M University Job Board - <http://wfscjobs.tamu.edu/job-board>
Probably the biggest job board outside of AFS.
- Minnesota Department of Natural Resources [Search Jobs / Careers in the State of Minnesota \(mn.gov\)](#)
- Pacific States Marine Fisheries Commission - <http://www.psmfc.org>
Fisheries related jobs throughout the Western states. Works cooperatively with many state/federal agencies.
- Michigan State University - <http://www.fw.msu.edu/employment>
Excellent resource for information on employment, graduate school, etc. No direct job listings, but has links to many state/federal fish and wildlife sites.



Brown Trout captured during electrofishing survey - Pine River, Southeast MN

Pro Tips:

- *When applying for jobs, be sure your email address and voicemail are professional. Anything crude, rude, or suggestive sends a negative message. If unsure, consider setting up a new email that you use just for your job search communications.*
- *If you aren't sure you meet the requirements for the position, or it's unclear what they want in the application package, call the hiring supervisor and ask!*

Step 2: Job Applications

Most job announcements will specify exactly what documents they want in an application package. This usually includes:

- Company Application Form
- Cover Letter/Letter of Interest
- Resume
- References

If nothing is specified, include the items listed above, or call and ask. Generally, do not include transcripts or letters of recommendation unless they are specifically requested. Be sure to follow the instructions on the job announcement! Failure to do so can lead to your application not being considered.

Your cover letter and resume are the primary documents you will use to convey information to potential employers. The cover letter should address how your values, interests, and professionalism relate to the job you are applying for, and how that makes you a great candidate for the job. Resumes typically focus on your education, experience, skill, and abilities.

Cover Letters

Cover letters are simple but often difficult to write. Many people find it difficult to write about themselves. However, the cover letter is just as important as your resume. It is your opportunity to write something personal and meaningful. This is where you can express your values, interests, and level of professionalism, as well as your knowledge of the company and/or the job. Don't simply re-write the information on your resume. Instead, highlight the skills or information about you that may not be obvious from your resume. You can use the cover letter to convey specific examples of your accomplishments and experience. Because of the opportunity the cover letter presents for conveying additional information, be sure to include one with every resume that you send, even if one is not required.

Cover Letters - format

A cover letter should be one page, 3-5 paragraphs, and formatted in the Block Letter style (see example at end of guide). Use single space, with double space between paragraphs and 12pt. font.

- **Header** - standard header (your address, their address, date, and salutation).
- **First Paragraph** - Use this paragraph to briefly introduce yourself. Identify the job (job title, announcement number, etc.) you are applying for. You can also include information on how you heard of the job.
- **Middle Paragraphs** - Explain why you are right for this job. Describe relevant work, school, volunteer or life experience. Describe how you would be a valuable addition to the team and what makes you different from every other applicant. Mention non-professional work if you can describe it in terms of the transferable and applicable skills ("As a customer service rep, I learned to communicate effectively with the public."). Explain why you want this job or want to work for this employer/supervisor, and why you think the job/project is important in terms of conservation or management. Be specific and demonstrate your knowledge of the job or organization.
- **Last Paragraph** - End on a positive note, and be sure to thank them for considering you for employment. State that you would like to communicate further, then follow up!
- **Bottom** - Use a standard closing ("Sincerely,"). Type and sign your name.

Cover Letters - additional guidelines

- Generally, only include information about your extracurricular activities if they directly relate to the skills/abilities needed for the job ('I am an avid backpacker and frequently navigate to remote lakes using a map and compass').
- If you use a sentence such as "I look forward to speaking with you about the position", then the employer will be expecting you to call them. An employer is not going to call you to let you know more about the job. It is your responsibility to gather information about the job/projects/company.
- Proofread! Spell check won't pick up all errors. Be sure to have someone else proof-read your cover letter and resume. Ask a supervisor, co-worker, professor, or utilize the ICAFS resume review service!
<http://www.idahoafs.org/freeResumeEvaluation.php>
- Sign your letter carefully and professionally.

Pro Tip:

Don't use the same cover letter for each job you apply for.

Write each one separately and tailor it for each individual position. Using the same cover letter for each job can result in mistakes such as forgetting to change the name/job/employer. These mistakes show a lack of attention to detail and can prevent you from being considered for a job.



Musky research being conducted - Little Shoepack Lake, MN



Ariel rotenone application - Finland, MN Area Fisheries Office

Pro tip:

If you don't have much (or any) experience, try to find volunteer opportunities with companies you are interested in applying to in the future. Many times, a volunteer opportunity can turn into a job later, because the supervisor/company had the chance to get to know you and see your work performance first hand.

Resumes

A resume is a synopsis of your credentials. Resumes are often the first contact you will make with potential employers and should be tailored specifically to each position. It should be clear and concise while providing enough relevant information to capture their attention. In general, a resume should include:

- **Header**
 - * Include your full contact information.
- **Objective statement** (optional)
 - * Tailored to the specific position.
- **Education**
 - * Name, city, and state of college; degrees earned; year of graduation (or anticipated graduation). GPA is optional.
- **Work Experience**
 - * List jobs in reverse chronological order.
 - * Include job title, company, city/state, dates of employment, and supervisor's name.
 - * Provide concise descriptions of your duties and responsibilities.
- **Volunteer Experience**
 - * Provide a concise description of your duties and responsibilities.
- **Other certifications, licenses, skills, training, etc.**
 - * List only current certifications; include date of expiration
 - * Relevant training or skill sets (GIS, Wilderness First Aid, etc.)
- **References**
 - * Include complete contact information: full name, title, company, address, phone, and email.
 - * Include at least 3 professional references (or whatever is requested).

Resumes - key concepts

- Use the same format and style throughout your resume. Use 11 or 12 point fonts.
- Don't use clip art, "busy" fonts, pictures, or personal information.
- You do not need to limit your resume to one page; Fish/Wildlife resumes are often longer because of the seasonality and complexity of these jobs. However, try to keep your resume to no more than 4 pages. If you have numerous previous jobs, consider eliminating the oldest ones unless they are directly relevant.
- Use achievement/action verbs to better describe your work and accomplishments (supervised, coordinated, performed, analyzed, trained, etc.).
- Be specific ('identified fish species and gender, measured snout-vent length and assessed reproductive condition' instead of 'collected data on fish').
- Include key words that are directly applicable to the job, especially if they are used in the job announcement. (e.g., if announcement mentions creel surveys, be sure to highlight your creel survey experience).
- List the supervisor and employer with each job description. This helps the reviewer match your jobs with the references you provided.

Resumes - don't sell yourself short

One of the biggest issues we see in resumes is not giving yourself enough credit for the level of responsibility you had, and not showing an understanding of why you were doing the work you conducted. Here are a few examples of the types of wording that really add to a resume.

Highlight your level of responsibility:

- Responsible for training field crew on proper protocols and sampling techniques.
- Successfully managed multiple projects, including prioritization of projects and fieldwork when scheduling conflicts occurred.
- Communicated effectively with my supervisor, other biologists, and field crews to ensure projects were completed correctly and in a timely manner.
- Routinely worked unsupervised, and was responsible for making independent decisions in the field to ensure the projects were completed while maintaining crew safety.
- Responsible for planning and execution of all fieldwork activities, data collection, and data entry.
- Assisted with data analysis, development of tables and graph, and writing the annual report.

Show you understand of the purpose of the work you were doing:

- Effectively interacted with the public while conducting creel and angler opinion surveys to evaluate the effects of a reservoir drawdown project on the fishery and angler satisfaction.
- Assisted with amphibian, fish, and limnology sampling of alpine lakes for a long-term project assessing the potential impacts of historic fish stockings on amphibian populations.

"The one biggest thing a candidate can do to improve their chances is to call me and ask good questions about the position and the project. This shows they are truly interested. Since <10% of applicants ever ask anything about the job (even during the interview), this is a huge factor when I decide who to hire."

**- Robert Hand
Regional Fisheries
Biologist, IDFG**

Resumes - references

Employers contact references to verify your employment history and to learn about your work performance in previous jobs. This is very important, as your references let a potential employer know if you are capable of performing the job. Conversely, it can also bring to light issues in previous jobs that would prevent you from being able to perform the job to the expectations of the hiring supervisor.

- Always include references with your resume. Do not write "references upon request" on your resume. Make it easy for the employer!
- Do not use personal references unless asked for (i.e. your mom, friend from school, etc.).
- If space does not allow references on your resume, include them on a separate sheet.
- Ask permission to use someone as a reference; provide each reference with a copy of your resume.
- Do not assume someone will provide you with a good reference! When you ask them for permission, be sure to specifically ask if they are willing and able to provide a positive reference. If you don't ask, they have no obligation to tell you what kind of reference they will provide!



**Walleye egg take
- Pike River
Hatchery Tower,
MN**



Lake Trout Stocking - Little Trout Lake near Crane Lake, MN

What if you know someone on the interview panel?

In this situation, don't assume the interviewer already knows everything about you. Often, candidates don't provide in-depth answers to the questions, and omit important information because "they already know me, or know I can do this work". They might, but not answering the questions fully gives the impression you don't know how to answer the questions.

Improve Your Odds

One of the most important things you can do to improve your odds on being offered an interview (and to help you prepare for an interview) is to call the hiring supervisor and ask for more information about the position. Why? It will provide you with valuable information you can use during an interview, and help you decide if this job is right for you (you might learn that the job is not what you thought it was). Additionally, it shows that you are serious about the position and about being prepared. Develop some questions beforehand depending on how much information is provided in the announcement:

- Can you tell me more about the duties and responsibilities of the job?
- What project(s) will this position be involved with?
- What is the company trying to learn from this project?
- How will these data be used to manage/conservate this fishery?
- What are the qualities and/or skills you are looking for in a top candidate?

Step 3: The Interview

Congratulations! You got an interview! However, you still have work to do. Never show up to an interview without preparing. Even some basic preparation can greatly improve your chances of being offered a job. This means ensuring you understand the expectations of the position you are applying for, what projects the position works on, and why/how the work is being conducted.

- Always research the employer, position, project and supervisor so you know as much as possible about the position, and can show why you are the best person for the job.
- Find annual reports/journal articles about the projects. These can often be found on the company website. If you can't find any, then ask for copies when you call the hiring supervisor.
- Hopefully you have already called the hiring supervisor to discuss the job! If not, do it now. Either way, don't hesitate to call again for more detailed information about the job. Ask for copies of recent annual reports if you couldn't find them on your own.
- Practice for the interview! Have someone ask you interview questions and practice answering them.

Interviews - attire

What you wear to an interview is extremely important. Even for an entry level position, this is still a professional job, not a summer job at a burger joint. Dress appropriately! This means your attire should be “business professional” or “business casual”. If you aren’t sure, call the hiring supervisor and ask if business casual or professional would be appropriate. General guidelines for these styles are:

- Women
 - Business professional = professional dress or dress slacks w/ blouse and jacket; dress shoes
 - Business casual = dress slacks with blouse/collared shirt/sweater/cardigan; dress shoes.
- Men:
 - Business professional = suit and tie; dress shoes.
 - Business casual = dress slacks with collared shirt, sweater, tie optional; dress belt and shoes.

Do not wear casual clothing (jeans, t-shirts, hats, sunglasses, tennis shoes, boots, flip flops). This sends a negative message about your professionalism and level of interest in the position. If an employer has several candidates that are equally qualified, the job offer may come down to who presented themselves the best. When in doubt, overdress!

Interviews - do’s and don’ts

Interview “do’s”

- Be prepared! Have a notebook, pencil, copies of your resume, and a written list of questions to ask.
- Be on time (or early) for your interview!
- Go to the interview by yourself; don’t bring your family or friends.
- Display poise and good posture. Be attentive and listen. Use proper English. Use good eye contact with the interview panel.
- If you don’t know the answer or don’t have direct experience regarding the question, be honest, but try to answer it based on other work/life experiences. Show you can adapt and relate.
- Be enthusiastic and have a positive attitude.

Interview “don’ts”

- Do not use tobacco products, gum, or food before or during the interview.
- Avoid nervous habits.
- Do not use slang or curse words, even if the interview is relaxed or an interviewer uses them.
- Do not ask about salary or benefit issues. This should only be discussed when a job offer is made.
- Do not project a "what's-in-it-for-me" attitude. Think "what can I do for the company?"
- Do not be negative about current or previous employers.

Pro Tip:

An interview works both ways. Part of an interview is determining if this company/job/supervisor is who you actually want to work for. Therefore, have relevant questions about the company, job, project, and interviewer to ask during, or at the end of, the interview.



Winter dissolved oxygen testing - International Falls Area Fisheries Office



**Fisheries Survey -
Shoepack Lake,
near International
Falls, MN**

Pro tip:

If given the option, make the effort to do an interview in-person whenever possible. You will make a much better impression, and it is easier for you and the interviewer to learn about each other and read body language. A phone or video conference interview may feel "safer" but only do this if the distance is too far for reasonable travel, or if work/family obligations prevent you from going.

Interviews - telephone interview

Telephone interviews are common in the fisheries/wildlife profession, and can often be the only interview option for internships or short-term seasonal positions. Expectations for a telephone interview are not much different from a face to face interview. However, in a telephone interview, your biggest asset will be your communication skills.

- Be ready at the arranged time. Make sure you have a good telephone and it is static free. Avoid using a cordless or cell phone whenever possible.
- Ensure you have a quiet space without interruptions (pets, kids, etc.)
- Have your resume and other documents you may need, paper and pen, and a glass of water.
- Answer deliberately and clearly. If you're smiling, you're likely sounding positive.
- Don't answer with only a "yes" or "no"; explain your answers.
- If you don't understand a question or didn't hear clearly, ask them to repeat the question or explain.
- Remember: the interviewer can't see you, so he/she can't read your body language.

Interviews - Video Conference interview

Video conference interviews are becoming more common in the fisheries/wildlife profession, and can be offered as an interview option for full time positions. This type of interview may only be granted if the person being interviewed lives multiple states away from the interview location. Expectations for a video conference interview are not much different from a face to face interview.

- Be ready at the arranged time. Make sure you have the right video conference software installed on your computer well before the interview.
- Be aware of any time zone differences. Plan accordingly.
- Test your microphone and camera before entering the interview.
- Ensure you have a quiet space without interruptions (pets, kids, etc.)
- Have your resume and other documents you may need, paper and pen, and a glass of water.
- Avoid typing on your computer or rustling papers during the interview.
- Make sure to look at the camera and not down at the screen or keyboard.
- If you don't understand a question or didn't hear clearly, ask them to repeat the question or explain.
- Be mindful of what is in the camera frame behind you. The best place for video

Interviews - FAQ's

The following is a short list of questions that are representative of those often asked by fish/wildlife employers. However, be prepared for questions directly related to the position, the projects you would be working on, and more complex fish/wildlife questions depending on the level of the job.

Examples of general questions:

- What are your long range and short range professional goals, and how are you preparing yourself to achieve them? How does this job fit into those goals?
- What do you consider to be your greatest professional/personal strengths and weaknesses?
- What makes you the best candidate for the position?
- Describe your experience leading others. What do you believe are necessary traits for a good leader?
- Describe your previous experience as it relates to this job.
- What did you do to prepare for this interview?
- If hired, what steps would you take to minimize the time it takes to familiarize yourself with this project?
- Discuss your experience managing multiple priorities.
- Discuss your experience with data analysis and writing reports.

Examples of specific/technical questions:

- Our agency has received money to build a new reservoir. Describe the process you would take to determine what fish you would stock in this reservoir.
- Describe the basic function and purpose of Electrofishing.
- What are the advantages and disadvantages of hatchery supplementation on Minnesota walleye populations?

Interviews - after the interview

What you do (or don't do) after the interview can impact your chances of receiving a job offer.

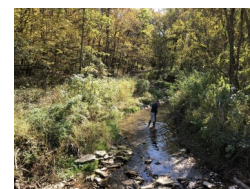
- When the interview ends, thank the interviewer(s) for their time. Also, thank any administrative staff/receptionist that assisted you upon your arrival at the office. Interviewers will notice how you treat the administrative/support staff.
- Conduct a self-evaluation soon after you leave. What did you do well? What could you do better?
- Write down as many of the interview questions as you can remember. These will help you prepare for future job interviews.
- Send a thank you email for the interview within 24 hours.

What if I don't get the job?

- Don't become discouraged if you fail to get the job. Take steps to strengthen your potential – improve your application package/interview skills, find training opportunities, volunteer, gain more experience/skills/education.
- It's okay to be disappointed, but do not get upset or annoyed with the person who calls you. This could result in your never being considered for employment by that person (or even that entire company) again.
- Ask for feedback! This will help you better prepare for next time. Word your request like: "I would appreciate some feedback regarding what I could have done better so I can improve myself as a candidate in the future". Do not ask: "Why didn't I get the job". This comes across negatively.
- Be sure to thank them again for their consideration. It never hurts to be nice and professional.

"During phone interviews, it can be easier to lose focus or become distracted since you are not in the same room with the interviewer. This can lead to rambling or difficulty answering questions. I recommend closing the blinds, turning off all other electronics, and finding a visual 'focal spot' (such as your note pad) to help you concentrate."

**- Helen Neville
President, Idaho
Chapter AFS;
Trout Unlimited**



**Temperature
logger
deployment -
Lanesboro, MN
Fisheries Area
Office**

Social Media

It is important to remember that potential employers may be able to see your social media activity. While some employers have strict rules against looking at applicant's social media, some do not. This means social media could be used to help determine whether or not to hire you. With that in mind, what are employers looking for on your social media?

- Your social media is an accurate portrait of what you're really like. It can give employers a better feel for who you are outside of the interview. This could either help or hurt you.
- Does your social media match the information you've provided about your education, experience, previous jobs, etc.?

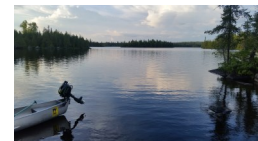
Main reasons employers are turned off by a candidate's social media:

- Illegal activity (drug use, criminal behavior, etc.).
- Anything that indicates you lied on your resume or during an interview.
- Posts that are provocative or of a sexual nature.
- Discriminatory comments related to race, gender, religion, etc.
- Excessive profanity, poor spelling/grammar, alcohol use, etc.

However, use common sense. There is a big difference between a picture of you with a beer at a restaurant vs. a picture of you passed out at a party surrounded by empty beer cans. The best advice is: think before you post!

"During a phone or video conference interview, be sure to ask about the area you may potentially be relocating to. Also do your own research on the area. Some fisheries offices are in remote areas with little amenities such as Walmart. I would highly recommend visiting a location especially if offered a position."

**- Ryan Carrow,
Assistant Area
Fisheries
Supervisor - MN
DNR**



**Fisheries Survey
on Perent Lake in
the Boundary
Waters Canoe
Area Wilderness -
Finland Area
Fisheries Office**

Sample Cover Letter

Ryan Carrow
123Main St.
St. Paul, MN 55101
(218) 555-1234
LastName.FirstName@gmail.com
January 21, 2022

Dear John Doe,

I am writing to apply to the Assistant Area Fisheries Supervisor position (#51823) on the State of Minnesota Careers website. I have worked with numerous state agencies as a Fisheries Technician or Biologist, and I am interested in working for Minnesota Department of Natural Resources as an Assistant Area Fisheries Supervisor in International Falls, Minnesota.

My career in fisheries started in an internship I held while completing my Bachelor's of Science degree in Aquatic Biology Fisheries Management. Since then I have held positions with Michigan Department of Natural Resources (MIDNR), Idaho Department of Fish and Game (IDFG), and Arizona Game and Fish Department (AZGFD) gaining field experience with different sampling methods as well as analyzing data and writing management plans. In 2021, I completed my Master's of Science in forestry and environmental management (M.Sc.F) at the University of New Brunswick, Canada where I gained an understanding of statistical methods and how to apply them to management and conservation questions. I used radio telemetry and habitat mapping techniques to evaluate adult spawning migration and seasonal habitat use of Atlantic Salmon in the Miramichi River. This program has helped develop skills for developing and implementing a project, provided me with a good foundation to apply statistical methods for analyzing data, and improved my scientific writing.

Throughout my career I have gained valuable work experience, an advanced education relevant to fisheries management, and a growing interest for conserving and managing aquatic resources. I have completed of my M.Sc.F degree and will graduate in 2021. During my graduate work, I worked with radio telemetry software, Program R, Excel and GIS; programs that are commonly used in fisheries management. As a Reservoir Biologist with Arizona Game and Fish Department I have used my education to perform fisheries surveys, analyze data, write management plans, and make important management decisions regarding fish populations in eastern Arizona reservoirs. I prefer to be challenged to learn or execute something new and work through difficulties using problem solving skills. I also enjoy presenting the findings of projects I have been involved with and believe it is important to make the information available to the public. I hope to continue using the skills I have developed to answer questions regarding conservation and management objectives in Minnesota's aquatic systems.

My resume is enclosed for your review. Thank you in advance for your time and consideration. If you have any questions or require additional information, please feel free to contact me at any time via phone at (218) 555-1234 or via email LastName.FirstName@gmail.com. I would be interested in making an appointment with you to further discuss the position.

Sincerely,

Ryan Carrow

Sample Resume

Ryan M. Carrow

123Main St.
St. Paul, MN 55101

Phone: (218) 555-1234
Email: LastName.FirstName@gmail.com

Education

M.Sc.F., Forestry and Environmental Management, University of New Brunswick, Canadian Rivers Institute, 2021
Thesis Title: Freshwater migration and behavior of wild adult Atlantic Salmon (*Salmo salar*) in the Miramichi River, New Brunswick, Canada.
Advisor: Dr. Tommi Linnansaari

B.S., Aquatic Biology Fisheries Management, Bemidji State University, 2015
Advanced project title: Effects of Angling Pressure on Northern Pike Size Structure.
Advisor: Dr. Andrew Hafs

Employment

Assistant Area Fisheries Supervisor (International Falls) **May 2022 – Present**
Minnesota Department of Natural Resources (Supervisor: Phil Talmage)

Conducted fisheries management surveys on small lakes in the International Falls Fisheries Area in Northern Minnesota. Collected biological data on numerous fish species to estimate catch per unit effort (CPUE), length, weight, and age. Processed otoliths for aging and scales for age back calculations. Assisted Large Lake Specialist with gillnet and seining surveys on Rainy and Kabetogama lakes.

Wildlife Specialist II (Reservoir Biologist) **September 2020 – May 2022**
Arizona Game and Fish Department (Supervisor: Ryan Follmuth)

Conducted fisheries surveys in cold and warmwater managed reservoirs in the White Mountains in eastern Arizona. Collected biological data on numerous fish species to estimate catch per unit effort (CPUE), population size, growth, proportional stock density, and relative weight. Assisted streams biologist with backpack electrofishing surveys. Designed and implemented creel surveys. Used ArcGIS Survey 123 Connect to build Creel Surveys. Analyzed creel survey data. Design, led, and implemented habitat projects. Wrote management plans, survey reports, and Environmental Assessment Checklist. Created and managed volunteer events using department volunteer portal. Responsible for entering QA/QC, and analysis of fish data in Excel. Assisted and led interview process for hiring seasonal staff. Assisted in supervising seasonal staff. .

Fisheries Technician **February 2020 – August 2020**
Idaho Department of Fish and Game, Lewiston (Supervisor: Marika Dobos)

Responsible for maintaining and operating an anadromous adult fish weir and juvenile fish screw trap on Fish Creek (Lochsa River drainage), a remote field site in north central Idaho as part of the Idaho wild steelhead and salmon monitoring program. Fish Creek adult weir is a long term high priority project focused on ESA listed wild adult steelhead. Primarily worked independently and made decisions following protocols. Collected biological information on adult and juvenile fish

Sample Resume (continued)

to estimate escapement. PIT tagged juvenile Chinook Salmon and steelhead to estimate smolt survival escapement to Lower Granite Dam, and number of adults returning to Lower Granite dam. Responsible for entering and QA/QC of fish data in P4 software and Excel. Completed weekly reports on total catch. Assisted in training two seasonal technicians. Performed routine maintenance on generators, chainsaw, and weed-eater.

Graduate Research Assistant

University of New Brunswick, Canada

August 2017 – May 2021

(Supervisor: Dr. Tommi Linnansaari)

Evaluated Atlantic Salmon spawning migration and seasonal habitat use in the Miramichi River using radio telemetry and habitat mapping. Externally attached radio transmitters to adult salmon. Used passive and active telemetry techniques to locate salmon. Collected habitat data using the modified Borsányi mesohabitat scale and modified Wentworth substrate scale. Organized data in Excel and geographic information system (GIS). Used statistical packages Program R and Excel to analyze data. Currently writing thesis. Presented research at public and professional meetings. Assisted with writing permit proposals and monthly progress reports. Supervised seasonal staff.

Fisheries Technician

Idaho Department of Fish and Game, Salmon

March 2016 – August 2016

(Supervisor: Matt Belnap)

Responsible for maintaining and operating anadromous adult fish weirs and juvenile fish screw traps on small tributaries in the Salmon River basin in central Idaho as part of the Idaho wild steelhead and salmon monitoring program. Collected biological data on adult and juvenile steelhead to estimate escapement. PIT tagged juvenile Chinook Salmon and steelhead to estimate smolt survival, escapement to Lower Granite Dam, and number of adults returning to Lower Granite dam. Responsible for entering and QA/QC of data in a statewide database used to store rotary screw trap data, P3, and Excel.

Fisheries Technician

Michigan Department of Natural Resources, Alpena

May 2015 – November 2015

(Supervisor: Bill Wellenkamp)

Responsible for maintaining, deploying, and retrieving gill nets and trawls in Lake Huron. Assisted in collecting biological data and samples on numerous fish species to estimate abundance, recruitment, mortality, biomass, and movement. Collected lake trout gut contents for diet analysis. Collected lake trout tissue samples for bioenergetics analysis. Prepared otoliths, scales, spines, and maxillary bones for imaging and aging to estimate age structure. Research was being conducted to compare the accuracy of maxillary bone ages to other hard structure ages. Assisted in a reef mapping project using a depth finder and Dr. Depth software in Saginaw Bay as part of a walleye habitat restoration project. Responsible for entering and QA/QC of data in Excel. Assisted with preparing a presentation for a professional meeting.

Fisheries Intern

Minnesota Department of Natural Resources, Grand Marais

May 2014 – August 2014

(Supervisor: Steve Persons)

Conducted fisheries surveys on numerous lakes and small streams in north eastern Minnesota as part of a program to monitor fish populations and evaluate management actions. Responsible for maintaining, deploying, and retrieving fyke and gill nets. Operated a backpack electro shocker. Assisted in collecting biological data on numerous fish species to estimate abundance, recruitment, growth, and age structure. Collected various water measurements using a YSI and flow meter and pre-determined benchmarks. Responsible for entering data in the MNDNR statewide database system.

Sample Resume (continued)

Volunteer Experience

Fisheries Volunteer

Illinois Department of Natural Resources

April - May 2010

Certifications/Training

- First Aid/CPR Certified (current)
- ATV Safe Rider course Training (June 2022)
- Swift water training (February 2020)
- Boating operation certificate in Illinois, Minnesota, Michigan, and Canada
- Snowmobile operation certificate in Illinois

Publication

Carrow, R. 2014. Effects of Angling Pressure on Northern Pike Size Structure. *Bemidji State University Journal of Student Research*.

Oral Presentations

Carrow, R., Linnansaari, T., and Curry, R.A. 2019. Summer migration and behaviour of wild adult Atlantic Salmon (*Salmo salar*) in the Northwest Miramichi River, New Brunswick, Canada. 26th Annual Graduate Research Conference, University of New Brunswick, Fredericton. 21 March 2019.

Carrow, R., Linnansaari, T., and Curry, R.A. 2019. Summer migration and behaviour of wild adult Atlantic Salmon (*Salmo salar*) in the Northwest Miramichi River, New Brunswick, Canada. Atlantic Salmon Ecosystems Forum, Québec, QC. 12 March 2019.

Carrow, R., Linnansaari, T., and Curry, A. 2018. Migration and behavior of wild and smolt to adult-supplementation (SAS) adult Atlantic Salmon in the Miramichi River, New Brunswick. Miramichi Salmon Association 2018 Science Day, 27 April 2018, Boiestown, New Brunswick.

Carrow, R., Linnansaari, T., and Curry, A. 2018. Migration and behavior of wild and smolt to adult-supplementation (SAS) adult Atlantic Salmon in the Miramichi River, New Brunswick. 1st Annual 1st Collaboration for Atlantic Salmon Tomorrow (CAST) Science Colloquium, 23 April 2018, Miramichi, New Brunswick.

Carrow, R and Linnansaari, T. 2018. Radio-tracking wild and smolt-adult-supplementation (SAS) adult Atlantic Salmon in the Northwest Miramichi River. Atlantic Salmon Ecosystems Forum, 18 January 2018, Orono, Maine.

Wills, T., M. Thomas, D. Fielder, and **R. Carrow**. 2016. Use of low-cost sonar to assess reef habitat in Saginaw Bay and the St. Clair – Detroit River System, Michigan. 76th Midwest Fish and Wildlife Conference. Grand Rapids, Michigan.

Sample Resume (continued)

Oral Presentations

Carrow, R. 2015. Effects of Angling Pressure on Northern Pike Size Structure. Minnesota Chapter of the American Fisheries Society annual meeting. Brainerd, Minnesota.

Poster presentations

Carrow, R., Linnansaari, T., and Curry, A. 2018. Migration and behavior of wild and smolt to adult-supplementation (SAS) adult Atlantic Salmon in the Miramichi River, New Brunswick. 25th Annual Graduate Student Research Conference, University of New Brunswick, Fredericton. 23 March 2018.

Carrow, R. 2014. Effects of Angling Pressure on Northern Pike Size Structure. Minnesota Chapter of the American Fisheries Society annual meeting. Mankato, Minnesota.

References

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