

#### Application Related Information

---

Application: Application Incomplete  
Grad Program Applying To: MES

Iteration Name: 202410\_GR\_G  
Program Name: MES

#### Recommendation Information

---

Recommended By: Carri LeRoy  
Recommenders Institution: Evergreen State College  
Waive Access to Recommendation Ltrs: I choose to waive my right to review this recommendation.  
Recommendation Form Submitted: ✓

Recommenders Title: Freshwater Ecology Faculty  
Contact Name: Alicia Heetderks  
Recommendation Waiver Choice:  
Recommendation Status: Received

Received Date: 01/09/2023 01:03 PM  
Recommendation Type: General  
Recommendation Entity ID: 1024000108383404

Recommender Assessment: I recommend this applicant with reservation.  
Recommender Form: Letter of Recommendation  
Recommendation Owner: Josephine Bernier

#### Recommender Form Questions

---

How long have you known applicant:	Applicant ability as self-directed learner:
Time since last contact with applicant:	Applicant as productive member of group:
Relationship with Applicant:	Applicant most significant strengths:
Ability to complete rigorous grad program:	Responsibility/reliability:
Communication Skills - Oral:	Communication skills - written:
Service Orientation-sensitivity/empathy:	Ability to work independently:
Ability to handle stress:	Ability to think critically:
Ability to analyze/problem solve:	Ability to think creatively:
Openness to feedback:	Potential for leadership:
Ability to work in a team:	Personal/professional reflection:

#### Description Information

---

Description:

Form URL: <https://evergreenstatecollege.radius>

#### Other Information

---

Created Time: 11/02/2022 11:07 AM  
Modified Time: 01/09/2023 01:03 PM

Created By: Josephine Bernier  
Modified By: Josephine Bernier



January 6, 2023

The Evergreen State College  
Master of Environmental Studies

Dear Graduate Selection Committee:

I am writing a letter of recommendation for Alicia Heetderks as an applicant for the MES Program. I am a member of the faculty at The Evergreen State College in the Environmental Studies Program and I have known the applicant for one year. The applicant did mixed academic work in an interdisciplinary upper division science program, providing the applicant with some strong foundational skills as well as some room for academic improvement.

The Evergreen State College is one of the oldest experimental colleges in the US. Most student learning takes place in 16-credit interdisciplinary courses with several faculty co-teaching overlapping material from multiple disciplines. I first worked with the applicant in an intense, full-time (16-credit), interdisciplinary course called “Freshwater Ecology and Hydrology” with a focus on group research projects that merged Hydrology, Aquatic Chemistry, Freshwater Ecology, Aquatic Entomology, Statistics, and GIS.

The applicant did strong independent work in the areas of the program I evaluated: freshwater ecology, aquatic entomology, and statistics. Learning in **Freshwater Ecology** was demonstrated through participation in class, workshop completion, demonstrated knowledge on quizzes and exams, and bi-weekly fieldwork reports. The applicant was able to complete all weekly workshops that allowed students to practice quantitative skills and apply knowledge of concepts to solving problems in freshwater ecology. The applicant did strong work on all quizzes and exams, demonstrating mastery of the concepts in freshwater ecology. Finally, students were asked to complete field tasks each week and submit bi-weekly reports on their freshwater ecology field experiences. The applicant consistently submitted detailed, organized, and well-documented field reports that included all required components: title, date, names, location, map, coordinates, hydrological information, habitat information, climate/weather information, data collected, illustrations, photographs, and a written narrative of the experience. The field reports were of consistently excellent quality. The applicant learned a lot about **Aquatic Entomology** and did excellent work on all assessments. In addition to learning about concepts in aquatic entomology, the applicant also dove into learning about how to classify and identify aquatic invertebrates using dichotomous keys. Learning the vocabulary alone is an impressive feat, but the applicant learned to correctly identify most invertebrates to order, and often family. This work was recorded in an organized notebook including notes about the dichotomous key, and a final complete taxonomic identification. The applicant struggled to provide all required details for each specimen, but did consistent work throughout the quarter. Finally, the applicant was an active participant in the **Applied Statistics I/II** component of this program, completing all weekly statistics assignments covering a variety of topics and the applications of statistics to real-world data. The work on statistics labs was consistently excellent. In addition, to expand the learning of statistics, the applicant completed all of the optional RStudio extensions, whereby additional learning in R language and coding to run statistics was the focus. The applicant should be commended on this additional work. Learning to code in R is challenging, but this will be an important skill moving

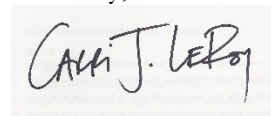
forward. Based on four quizzes and two exams, the applicant demonstrated mastery of statistical concepts and the ability to think through statistical problems. The applicant learned how to calculate descriptive statistics, understand probability and probability distribution functions, perform parametric statistics (Student's t-tests, Chi-square tests, analysis of variance (ANOVA), simple linear regression, multi-way ANOVAs, ANCOVA), permutative statistics (permutative ANOVA), multivariate statistics (permutative MANOVA, NMS ordination), and meta-analysis using various statistical software packages (R, JMP-in, JASP, PAST, OpenMEE, Excel).

Group work was much more challenging for the applicant who was a member of a collaborative research group that implemented the fall quarter project proposal with some modifications in winter quarter and expanded the ideas and research question into a full-blown research project. The culmination of the project was a final scientific research paper titled, "Measuring the Effects of Salmon Presence on Freshwater Macroinvertebrate Communities in Streams in Thurston County, WA." The applicant struggled to be a full and equal participant in this group research project. The applicant's contributions to this project were inconsistent; the applicant participated in some of the field and lab work, but their presence was unreliable. When pressed, the applicant completed assigned work but being present during the scheduled work time was problematic and some of the applicant's responsibilities had to be picked up by other group members. The applicant's contribution to the paper was limited to the first draft of the methods section and the GIS map. The applicant presented the site locations and methods in the oral presentation, reading from notes and making brief eye contact.

The applicant has developed a set of strong skills that will benefit them in graduate work; however, the challenges they faced during a group research project give me some reservations about their readiness for graduate work. This research experience was a major opportunity to learn the important skills of self-motivation, library research, scientific writing, application of statistical concepts, collaboration, and science communication. Unfortunately, at the time that I worked with the applicant, they were not ready for these aspects of upper division science work. I hope the graduate selection committee will take other evidence into consideration as to the applicant's readiness in these areas.

The applicant has the intelligence to do strong work at the graduate level. Please contact me with questions.

Sincerely,

A handwritten signature in black ink that reads "Carri J. LeRoy". The signature is written in a cursive, slightly slanted style.

Carri J. LeRoy, Ph.D.  
Associate Professor (Member of the Faculty)  
Environmental Studies Program  
The Evergreen State College  
Olympia, WA  
[LeRoyC@evergreen.edu](mailto:LeRoyC@evergreen.edu)