

Joshua Ankeny

NATURAL RESOURCES TECHNICIAN I

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Over the past three years I have been working for Tacoma Power in various capacities. My work with Tacoma Power began as a field technician performing various salmonid related field operations. Through the COVID pandemic, my job duties shifted to allow more focus on data analysis, data visualization and continued education with various data software and languages. During this period I have expanded my portfolio to include the advanced use of R, RShiny, Tableau, Snowflake, FME, Python and ESRI Products. Though I graduated with a M.Sc. Degree in Wildlife and Fisheries Resources, I have always had a deep-seated passion for data science, data visualization and automation. My passion for this field of work is expressed within this CV made wholly using R.

Employment

Natural Resources Technician I

Salkum - WA

CITY OF TACOMA

April 2022 -> Present

- Design and Implement Data Visualization Products (i.e., Dashboard, Web Applications, HTML and PDF Reports)
- Collect, Transcribe, Analyze and Report on data collected on daily project operations
- Use advanced statistical models to construct meaningful and comprehensive predictions
- Construct secure and manageable databases using various data software tools (i.e., Snowflake, Tableau, R, RShiny, FME, Databricks, ESRI Products, AWS Cloud Products)

Fisheries Technician II

Salkum - WA

PACIFIC STATES MARINE FISHERIES COMMISSION

September 2020 -> April 2022

- Continuation of Fisheries Technician I job duties
- Database structuring and management
- Development of Shiny web applications
- Development of ArcGIS data products
- Development of ArcGIS training videos
- Tableau dashboarding
- Data Pipeline Engineering (FME)
- Construct Data Reports
- Confer with State Fisheries agency

Fisheries Technician I

Salkum - WA

PACIFIC STATES MARINE FISHERIES COMMISSION

September 2019 -> September 2020

- Spawning ground surveys
- Camera creel analysis
- PIT tagging
- Broodstock biosampling
- In-Person creel
- Water quality
- Operate juvenile and adult fish collection facilities
- Operate fish crowders
- Repaired field equipment
- Assist with various aspects of fish transport

Graduate Research Assistant

Morgantown - WV

WEST VIRGINIA UNIVERSITY

May 2017 -> August 2019

- Designed two research projects
- Hired and supervised a team of field technicians
- Assessed fish community response to anthropogenic stressors
- Backpack electrofishing
- Identified fish to the species level
- Used ArcGIS to determine land use ratios, site selection and mapping
- Used R Statistical Software for statistical analyses
- Extensively researched background literature and prepared a detailed literature review

Field Technician

UNIVERSITY OF GEORGIA

Fairbanks - AK

May 2015 → August 2016

- Worked on the [Drift Model Project](#)
- Tested drift feeding behavior of Chinook Salmon, Dolly Varden, and Arctic Grayling
- Collected and cared for target fishes
- Performed gastric lavage
- Used underwater videography equipment
- Spent up to four consecutive days in the field

Education

West Virginia University

M.Sc. WILDLIFE AND FISHERIES RESOURCES

2016 → 2019

- GPA 4.0/4.0

Saint Francis University

B.S. MARINE BIOLOGY

2012 → 2016

- Magna Cum Laude GPA 3.71/4.0

Saint Francis University

BIOLOGICAL DIVING MINOR

2012 → 2016

Skills

Database Management

COLLABORATION WITH VARIOUS PROJECTS TO EXTRACT AND MERGE DATA, MAINTAIN CENTRALIZED REPOSITORIES, VERSION CONTROL, CONFORMITY TO PRE-ESTABLISHED STANDARDS, QUALITY ASSURANCE

Statistical Analysis

LINEAR REGRESSION, ECONOMICS, POWER ANALYSIS, HYPOTHESIS TESTING, BAYESIAN STATISTICS AND MODELING, BASIC ALGEBRA AND MATHEMATICS

Programming Languages

R, SQL:ANSI, MySQL, PYTHON, JAVASCRIPT

Markup Languages

RMARKDOWN, LATEX, HTML, CSS

Dashboarding Software

RSHINY, TABLEAU

Database Software

FME, SNOWFLAKE, AWS, DATABRICKS, GIT

Text Editors

RSTUDIO, AWS CLOUD9, VS CODE, NOTEPAD++

Microsoft

TEAMS, EXCEL, ACCESS, OUTLOOK, POWERPOINT, WORD, SHAREPOINT, OUTLOOK

Google Software

DOCS, SHEETS, FORMS

Video/Photo Editing Software

ADOBE PHOTOSHOP, ADOBE PREMIER RUSH

Other Languages

WRITTEN SPANISH, SPOKEN SPANISH WITH A REFRESHER

General

SELF-MOTIVATED, PRODUCTIVE IN BOTH A TEAM AND INDIVIDUAL SETTING, EFFECTIVE COMMUNICATION, LEADERSHIP SKILLS, SUPERVISORY EXPERIENCE, CULTIVATE INNOVATION, TRUSTWORTHY, SAFETY ORIENTED, TIME MANAGEMENT

Shiny Applications

Tacoma Power Cowlitz River Salmonid Runtime Tracker

[CLICK HERE FOR APP](#)

Cowlitz River Salmonid Runtime Comparison Dashboard

[CLICK HERE FOR APP](#)

Cowlitz Trout Hatchery PIT Array Dashboard

[CLICK HERE FOR APP](#)

Mayfield Juvenile Report Generator

[CLICK HERE FOR APP](#)

Research Experience

Cowlitz River Project

Tacoma Power

TECHNICIAN

- Assessed camera creel methodology
- Monitored salmonid activity in the Upper Cowlitz River Basin
- Monitored escapement success during volitional hatchery releases

The Effects of Unconventional Oil and Gas (UOG) on Downstream Fish Communities

West Virginia University

PRINCIPLE INVESTIGATOR

- Selected sites using ArcGIS based on previous collected data and land use attributes
- Reanalyzed fish communities through backpack electrofishing following DEP protocols
- Identified all collected fish to the species level
- Statistically compared fish communities along a Before After Control Impact design using R
- Published manuscript

The Effects of Unconventional Oil and Gas (UOG) on Resident *Semotilus atromaculatus* stress levels

West Virginia University

PRINCIPLE INVESTIGATOR

- Selected sites using ArcGIS based on watershed land use attributes
- Collected *S. atromaculatus* from both impacted and reference streams using backpack electrofishing
- Collected blood samples from the caudal vein of the specimen in the field
- Analyzed blood hematocrit levels in the lab
- Analyzed gill morphology in the lab
- Used R Statistical Software to analyze stress metrics
- Published manuscript

Age class distribution of *Semotilus atromaculatus* across a gradient of Unconventional Oil and Gas exposure

West Virginia University

PRINCIPLE INVESTIGATOR

- Selected sites using ArcGIS based on watershed land use attributes
- Collected S. atromaculatus from both impacted and reference streams using backpack electrofishing
- Collected weight and length measurements from 469 S. atromaculatus specimen
- Removed asteriscus and lapillus otoliths from all specimen
- Mounted and Aged the otoliths
- Used R Statistical Software and FAMS to analyze the growth and age metrics
- Published manuscript

The Effects of an Allicin diet on *Ichthyophthirius multifiliis*

Saint Francis University

PRINCIPLE INVESTIGATOR

- Introduced *Ichthyophthirius multifiliis* to healthy *Poecilia latipinna* specimens to induce disease
- Injected allicin into food pellets and inoculated treatment groups
- Monitored the health of diseased fish
- Performed routine water quality tests

Housing of Endotoxins in *Palythoa spp.* Zoanthid Corals

Saint Francis University

PRINCIPLE INVESTIGATOR

- *Palythoa spp.* corals were selected based on their known levels of Palytoxin
- Extracted dinoflagellates from individual species
- Monitored the effects of dinoflagellates on *Pimephales promelas*
- Followed EPA protocols
- Published manuscript

LEAD SURVEYOR

- Assessed the diversity of frogs through call identification
- Compiled and submitted data to USGS

Publications

1. Ankeny, J. N., Petty Ph.D., T. J., Phelps Ph.D., Q., & Merriam Ph.D., E. (2019). Analysis of unconventional oil and gas impacts on downstream Flsh assemblages and physiological stress. *Graduate Theses, Dissertations, and Problem Reports*, 3789. <https://doi.org/https://doi.org/10.33915/etd.3789>
2. Ankeny, J. N., & Shoemaker Ph.D., D. S. (2017). The housing of endotoxins in palythoa sp. zoanthid. *Spectrum Journal of Student Research at Saint Francis University*, 7(3).

References

Dr. Phil Sandstrom

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