

# Joshua Ankeny

FISHERIES TECHNICIAN II

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*Over the past 3 years I have been working as a Pacific States Marine Fisheries Commission contractor for Tacoma Power. I regularly perform various fisheries technician duties (i.e., spawning ground surveys, PIT tagging, biosampling, fish identification and enumeration, etc.). In the past 2 years my duties have shifted to allow for more focus on data analysis, data visualization and continued education with various data softwares. I primarily use R, ArcGIS Pro, Tableau and Snowflake to complete various data visualization projects. I have a deep seeded passion for data science, data visualization and automation.*

## Employment

### Fisheries Technician II

PACIFIC STATES MARINE FISHERIES COMMISSION

Salkum - WA

September 2020 → Present

- 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

PACIFIC STATES MARINE FISHERIES COMMISSION

Salkum - WA

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

WEST VIRGINIA UNIVERSITY

Morgantown - WV

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

### Teacher's Assistant

SAINT FRANCIS UNIVERSITY

Loretto - PA

August 2014 → December 2014

- Provided instruction and assistance to students in laboratory setting
- Assisted instructor with laboratory setup, laboratory cleanup, and exam administration

## Residents Assistant

SAINT FRANCIS UNIVERSITY

- Promptly handled emergency situations
- Established good rapport with a diverse group of individuals
- Learned good time management

Loretto - PA

August 2013 -> May 2014

## Education

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### West Virginia University

M.Sc. WILDLIFE AND FISHERIES RESOURCES

- GPA 4.0/4.0

2016 -> 2019

### Saint Francis University

B.S. MARINE BIOLOGY

- Magna Cum Laude GPA 3.71/4.0

2012 -> 2016

### Saint Francis University

BIOLOGICAL DIVING MINOR

2012 -> 2016

## Skills

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### Field

IDENTIFICATION AND ENUMERATION OF JUVENILE AND ADULT FISHES, SPAWNING GROUND SURVEYS, FISH SORTING BY MARK TYPE, CREEL, OPERATION OF TACOMA POWER ADULT AND JUVENILE FISH COLLECTION FACILITIES, PIT TAGGING, FAMILIARITY WITH TACOMA POWER PROJECTS AND OPERATIONS, BIOSAMPLING, ELECTROFISHING, SEINE NETTING, TRAWLING, GILL NETTING, GoPro PHOTOGRAPHY AND VIDEOGRAPHY, RADIO TELEMETRY, WATER QUALITY TESTING, SWIFT WATER SAFETY, RAFTING, ANGLING, CAMPING, BOATING

### Programming Languages

R, SQL:ANSI, MySQL, PYTHON, JAVASCRIPT

### Markup Languages

RMARKDOWN, LATEX, HTML, CSS

### Dashboarding Software

SHINY, 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

### General

TIME MANAGEMENT, COMFORTABLE IN BOTH A TEAM AND INDIVIDUAL SETTING, ABLE TO SUCCESSFULLY WRITE A GRANT AND RECEIVE FUNDING, LEADERSHIP SKILLS, SAFETY ORIENTED

## Shiny Applications

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### 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](#)

# Research Experience

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### 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

### North American Amphibian Monitoring Program

*United States Geological Survey*

#### LEAD SURVEYOR

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

# Certifications

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## Publications

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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

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### Dr. Phil Sandstrom

NATURAL RESOURCES SPECIALIST III TACOMA POWER

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### Dr. Jason Neuswanger

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### Scott Gibson

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