

Lisa A. DeBruyckere, President  
6159 Rosemeadow Lane NE  
Salem, OR 97317  
(503) 704-2884  
lisad@createstrat.com  
<http://www.createstrat.com>



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August 11, 2018

Hillary Heard, Natural Resources Specialist  
Chelan County Natural Resources Department  
411 Washington Street, Suite 201  
Wenatchee, WA 98801

Dear Hillary:

Thank you for the opportunity to submit a response to the solicitation for a Vulnerability and Habitat Suitability Analysis for Aquatic Invasive Species in Lake Chelan. The following Statement of Qualifications describes my company, my firm's previous and relevant experience with preparing vulnerability and habitat suitability assessments and plans, the project approach, a process for obtaining community and stakeholder input, a project timeline, and a project budget.

Creative Resource Strategies, LLC has been in business since 2001, assisting natural resource organizations with a variety of activities, from strategic planning and analysis of programs, to development of outreach campaigns and coordination of working groups. Clients have ranged from city, state, and federal government agencies, to nonprofit organizations, community groups, regional organizations and consortiums, and universities.

My company prides itself on its proven ability to problem solve and develop unique solutions that address the needs of each client, whether it is developing a long-range strategic vision, planning and implementing a comprehensive invasive species strategy, or proposing a set of best management practices to aid in aquatic invasive species prevention efforts. As president of the company, I have more than three decades of experience as a natural resource land manager, conservation educator, and administrator. I have a bachelor's degree in journalism and bachelor's and master's degrees in natural resource management from the University of Maine at Orono.

I appreciate the proactive approach of the Lake Chelan Watershed Planning Unit to assess the vulnerability and suitability of aquatic invasive species invasions in Lake Chelan to protect the ecosystem services that people living in and around Lake Chelan receive and rely on to maintain their quality of life. Conducting this type of analysis will enhance prevention efforts and prepare the community for potential introductions of aquatic invasive species.

I appreciate the opportunity to be considered for this important conservation initiative, and look forward to hearing from you.

Sincerely,

Lisa A. DeBruyckere, President  
Creative Resource Strategies, LLC

# Statement of Qualifications

## Creative Resource Strategies, LLC

### Previous and Relevant Experience

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In 2018, I subcontracted with one individual and the National Sea Grant Law Center to produce a [Model Quagga/Zebra Mussel Reciprocal Vessel Certification Program for Clear Lake and Neighboring Lakes in Northern California](#).

In 2018, I am completing a project with the City of Portland, Oregon, “*City of Portland Invasive Species Strategy Review and Enhancement Project*”, which includes an assessment of their first 10-year invasive species strategy, and development of a new 10-year strategy that includes aquatic and terrestrial species.

In 2017, I completed a [Vulnerability and Habitat Suitability of Fort Peck Lake Recreation, Water, Water Supply, and Fish and Wildlife Features to Invasive Mussel Impacts](#).

Since 2013, I have coordinated the [Vulnerability Assessment Team](#) within the Columbia River Basin, a group that works collaboratively to conduct vulnerability assessments on major hydropower facilities within the basin to prepare for an introduction of quagga or zebra mussels. One outcome of coordinating the group was the development of [Strategies to Conduct Vulnerability Assessments for High Priority Columbia River Basin Hydropower and Dam Facilities - a report on vulnerability assessments for the top 75 hydropower facilities and dam structures in the Columbia River Basin](#).

In 2016, I conducted a [Watershed Biosecurity Analysis on Terrestrial and Aquatic Invasive Species](#) for the Metro Vancouver Water Services Department in British Columbia.

I developed and maintain a website on aquatic invasive species for the western states and Canadian provinces – [www.westernais.org](http://www.westernais.org).

I am responsible for updating, on a regular basis, the [Columbia River Basin Interagency Invasive Species Response Plan: Zebra Mussels and other Dreissenid Species](#).

In cooperation with the US Fish and Wildlife Service and National Marine Fisheries Service, I am currently producing a manual for the four Columbia River Basin states titled, “Endangered Species Act Compliance for Dreissenid Mussel Response in the Columbia River Basin States,” to delineate a suite of most-likely rapid response eradication actions for a potential introduction of dreissenids in Columbia River Basin states, and to assess the potential for those actions to affect Endangered Species Act-listed species and critical habitats. Information in this manual is intended to facilitate future conference actions associated with an introduction of dreissenids in the basin.

In 2016, I completed a [Statewide Management Assessment of Invasive Species for the State of Montana](#) and facilitated their [Governor’s Summit on Invasive Species April 12–13, 2016 in Helena, Montana](#).

In 2015, I facilitated a [dreissenid mussel research priorities workshop](#) with more than 30 scientists; the goal was to achieve consensus on the highest priority research needs relating to dreissenid mussels. I co-facilitated an invasive tunicate workshop with representatives from the West Coast and Canada in 2014.

Reference/contact: Mark Sytsma, Portland State University.

While serving as the Invasive Species Coordinator for the Oregon Invasive Species Council for seven years, I produced a [Statewide Management Assessment of Invasive Species](#), a comprehensive document that assesses existing management plans, legislative gaps, policy issues, areas of overlap and redundancy, and roles and responsibilities associated with managing invasive species in the state. Reference/contact: Mark Sytsma, Portland State University.

I co-produced [Oregon’s dreissenid rapid response plan](#), and produced [Washington’s dreissenid rapid response plan](#).

I facilitated the development of an [action plan](#) at a meeting in Phoenix, Arizona in August of 2012 to advance legal and regulatory efforts to minimize expansion of invasive mussels through watercraft movements in the western United States.

I produced a regional framework for “[Advancing a regional defense against dreissenids in the Pacific Northwest](#)” for the Pacific Northwest Economic Region and Pacific States Marine Fisheries Commission.

I work with entities conducting water quality monitoring for dreissenids within the Columbia River Basin to display their [monitoring results](#) with others on the [www.westernais.org](http://www.westernais.org) website.

I co-facilitate [Building Consensus in the West](#), a USFWS-PSMFC effort to achieve consensus on uniform protocols and standards for watercraft inspection and decontamination in the 16 western states. During the past four three years, the group has successfully achieved consensus and improved coordination on numerous issues associated with the movement of watercraft and associated aquatic invasive species.

I conducted boat hauler outreach, compiling information on boat haulers, boat sellers and boat auctioneers focused on the Lower Colorado region, to ensure best management practices area used as companies haul, sell, and auction boats from dreissenid-infested areas of the country. One of the outcomes was the production of a short [2-page brochure](#) for boat haulers.

## Project Approach

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**Project Goal:** Assist the Lake Chelan Planning Unit in its efforts to prevent aquatic invasive species (AIS) infestations from occurring in Lake Chelan by assessing the vulnerability and habitat suitability variables associated with Lake Chelan.

1. **AIS Costs**—Compile and document information about the economic, environmental, and social costs of aquatic invasive species. This information will be used in the impacts analysis portion of the assessment.
2. **Regulations, Laws, and Authorities**—Compile information about existing regulations, laws, and authorities associated with the use of Lake Chelan (e.g., Chapter 8.32 Lake Chelan Use Regulations).
3. **Planning Efforts**—Document key elements of existing plans associated with the management of Lake Chelan, such as the long-term monitoring plan, the watershed plan, surveys of noxious weeds, implementation plans, subbasin plans, Public Utility District plans, fishery plans, and others.
4. **AIS Vulnerability and Suitability of Lake Chelan**—Compile and analyze data and information to determine aquatic invasive species habitat suitability and vulnerability of Lake Chelan:
  - **Assess Risk of Introduction**
    - Assess all existing and potential pathways of introduction of aquatic invasive species to Lake Chelan
      - **Access points**—Document access points for watercraft and other equipment entry into Lake Chelan.
      - **Source**—Document amount and source of watercraft and other equipment use in and around Lake Chelan.
      - **Activities**—Document all other types of recreation and activities that could result in an introduction of aquatic invasive species to Lake Chelan, such as rental and owned watercraft, fishing derbies, races, regattas, use of permitted hydroplanes, scuba diving, and other activities.
      - **Watercraft inspection and decontamination stations**—Document nearest watercraft inspection and decontamination stations in, around, and

near Lake Chelan as well as the potential to install watercraft decontamination stations.

- **Chelan PUD AIS Prevention Efforts**—Document Chelan Public Utility District AIS prevention efforts (e.g., Best Management Practices) in and around Lake Chelan to assess risk factors associated with hydropower facility activities (note: information compiled will not include an assessment of the hydropower facility itself, rather, pathways of AIS introduction that may be associated with hydropower facility management activities)
- **Infrastructure**—Document in-water and other infrastructure that might be susceptible to AIS infestation in Lake Chelan.

## 5. Assess Risk of Establishment

- **Water quality and chemistry**—Compile existing data and information on Lake Chelan water quality and chemistry (risk of introduction and establishment of dreissenids based on water quality parameters), including calcium, pH, water temperature, hardness, secchi depth, conductivity, dissolved oxygen, and substrate conditions.
- **Water Body Monitoring**—Document current water body monitoring and reporting efforts to assess if changes are needed to enhance prevention efforts.

## 6. Estimate Impacts

- **AIS**—Compile information on the most likely aquatic invasive species to be introduced to Lake Chelan based on risk assessments, current distribution, predicted distribution, pathways of introduction, and other factors, and estimate impacts.
- **Lake Chelan Activities and Uses**—Document all major activities and uses of Lake Chelan to assess the environmental, economic, and social costs to introductions of key, likely aquatic invasive species, especially those that are significant ecosystem change agents. At a minimum, uses will include:
  - Irrigation (describe municipal and irrigation water intake locations and their characteristics)
  - Domestic uses of Lake Chelan water
  - Fish and Wildlife, particularly threatened and endangered species
  - Water quality
  - Recreation (e.g., fishing, boating, scuba diving, etc.)
  - Tourism
  - Lake Chelan infrastructure, including all facilities and structures in the lake (over-water and shoreline structures)

## 7. Develop recommendations

2. Develop a suite of science-based recommendations to enhance prevention efforts associated with the introduction and establishment of aquatic invasive species to Lake Chelan. Potential categories of recommendations include planning, monitoring, outreach and education, watercraft inspection and decontamination, laws and regulations, and infrastructure.

## 8. Draft report

## 9. Incorporate edits to report

## 10. Finalize and distribute report (.pdf and online version)

## Process for Obtaining Community and Stakeholder Input

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Lake Chelan community members have been involved in numerous public processes to define their values and goals, including a recent process held in 2017 to define the vision for open space. That vision resulted in the articulation of four community goals relating to protecting water quality, promoting community health by providing increased access to natural features in and around Lake Chelan, protecting wildlife habitat, and preserving working (i.e., agricultural and other) lands. Any recommendations made through this vulnerability and habitat suitability analysis should be in alignment with the values and visions expressed by previous, and recent, planning efforts. To inform this process and project, Creative Resource Strategies, LLC considers two tiers of stakeholders:

- **Tier 1** includes the members of the Lake Chelan Watershed Planning Unit (LCWPU), which includes Chelan County, the City of Chelan, Lake Chelan Reclamation District, Chelan PUD, Chelan-Douglas Health District, Washington Department of Ecology, Washington Department of Fish and Wildlife, Washington Department of Health, Washington Department of Natural Resources, U.S. Army Corps of Engineers, the U.S. Forest Service, and interested individuals. It is expected the Tier 1 group will provide the primary guidance and direction associated with project implementation.
- **Tier 2** includes stakeholders and entities that represent other users and interests associated with the lake, such as irrigation districts and water suppliers, recreational groups and businesses, tourism groups (e.g., Lake Chelan Chamber of Commerce), domestic users of Lake Chelan water, local industries and businesses that rely on Lake Chelan water (e.g., agricultural groups) as well as any interested individuals and groups. Important federal, state, and local entities not included in Tier 1 (e.g., US Fish and Wildlife Service) would be included in this group. Tier 2 stakeholders are expected to have access to information about the project, including approach, process, and expected outcomes, and have an opportunity to review and comment on the draft report recommendations.

We propose convening with the Tier 1 group (LCWPU) during their regularly scheduled meetings to initiate the project, and share with them updates and progress as data and information is being analyzed and compiled, providing written progress reports every two weeks. In addition, prior to project initiation, we propose hosting a short (20-minute) recorded webinar that describes the purpose of the project, project approach, and timeline as well as opportunities for stakeholder input and comments during the process and prior to submission of the final report. As key project milestones are completed, they can be shared with the Tier 1 group via their regular convenings and bi-weekly progress reports, and shared with the Tier 2 group via short webinars.

*Note:* If additional public engagement process is desired by the LCWPU for this project, Creative Resource Strategies can design a more formal process. However, based on experience with past vulnerability and suitability assessments for aquatic invasive species, generally the management authorities associated with the water body (e.g., LCWPU) are the primary stakeholders.

## Project Timeline and Budget

Task	Timeline	Budget
Compile information about the economic, environmental, and social costs of aquatic invasive species.	OCT 15, 2018	8 hours x \$100/hr = \$800
Compile information about existing regulations, laws, and authorities associated with the use of Lake Chelan	OCT 15, 2018	16 hours x \$100/hr = \$1,600
Document key elements of existing plans associated with the management of Lake Chelan, such as the long-term monitoring plan, the watershed plan, surveys of noxious weeds, implementation plans, subbasin plans, PUD plans, fishery plans, etc.	NOV 30, 2018	24 hours x \$100/hr = \$2,400
Assess Risk of Introduction—Assess all existing and potential pathways of introduction of aquatic invasive species to Lake Chelan (access points, source, activities, watercraft inspection and decontamination stations, Chelan PUD AIS prevention efforts, infrastructure)	NOV 30, 2018	80 hours x \$100/hr = \$8,000
Assess Risk of Establishment via water quality and chemistry. In addition, document current water body monitoring and reporting efforts to assess if changes are needed to enhance prevention efforts.	DEC 15, 2018	32 hours x \$100/hr = \$3,200
Compile information on the most likely aquatic invasive species to be introduced to Lake Chelan based on risk assessments, current distribution, predicted distribution, pathways of introduction, and other factors	DEC 15, 2018	16 hours x \$100/hr = \$1,600
Estimate impacts—Document all major activities and uses of Lake Chelan water and assess the environmental, economic, and social costs to introductions of key, likely aquatic invasive species, especially those that are significant ecosystem change agents	DEC 30, 2018	40 hours x \$100/hr = \$4,000
Meeting presentations, webinars	ONGOING	16 hours x \$100/hr = \$1,600
Draft report	JAN 7, 2019	32 hours x \$100/hr = \$3,200
Incorporate edits to report	JAN 20, 2019	4 hours x \$100/hr = \$400
Finalize and distribute report	JAN 30, 2019	32 hours x \$100/hr = \$3,200
<b>SUBTOTAL</b>		<b>\$30,000</b>
Travel		\$800
<b>TOTAL</b>		<b>\$30,800</b>