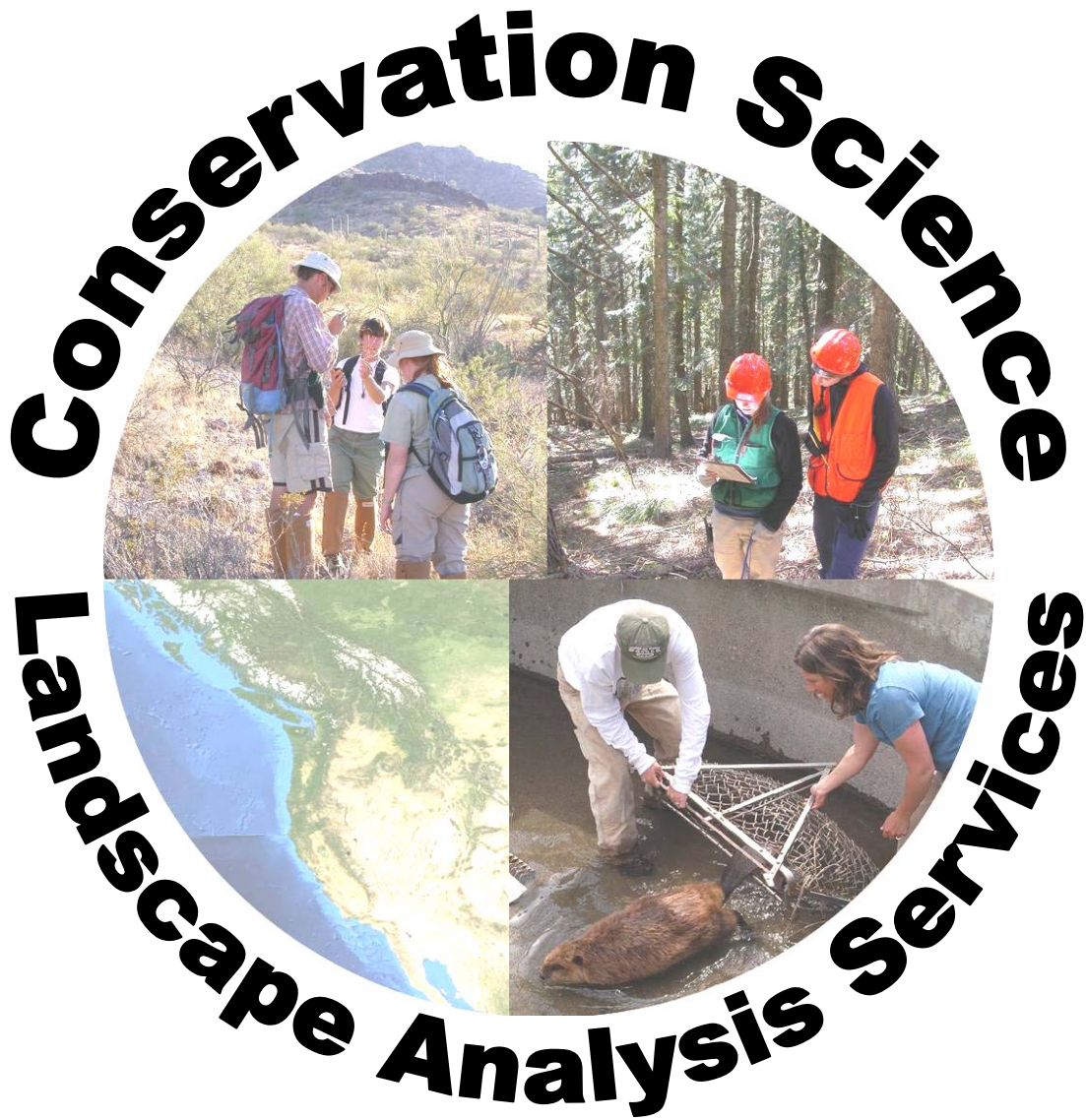


Pacific Biodiversity Institute  
STATEMENT OF QUALIFICATIONS



## About Pacific Biodiversity Institute

Pacific Biodiversity Institute conducts conservation science research, consulting, and data management services for organizations concerned with natural resources, land management and conservation.

We are a non-profit organization founded on the principle that good environmental stewardship and natural resource conservation requires integrating objective, high-quality science and information resources. To meet our mission goals, we offer advanced technology and natural science services to projects in the United States and abroad. We are a non-advocacy group dedicated to using the best-available science to enhance planning and management decisions.

Pacific Biodiversity Institute specializes in combining extensive expertise in conducting field surveys of diverse landscapes and ecosystems with advanced remote sensing and GIS technologies to create high quality information on important environmental resources.

Pacific Biodiversity Institute's science and technical staff and consultants all have natural science and/or resource management educational backgrounds. Most have 10 or more years of experience in their fields. We have worked successfully with a diverse set of public and private sector entities focused on a range of conservation-related topics both in the United States and abroad.

PBI offers a full suite of services that assist in the planning and management of natural resources:

- Evaluating the ecological integrity of ecosystems at multiple spatial scales
- Determining conservation priorities in landscapes critical to preserving biodiversity
- Conducting impact assessments of proposed development activities on ecosystems
- Developing management recommendations related to minimization and mitigation

## Central Contractor Registration Profile

**Duns Number: 049215085**

**TIN/EIN: 311602392**

### **CORPORATE INFORMATION**

Corporate Entity, Federal Tax Exempt  
(State of Incorporation is WA)

### **Business Types/Grants**

77 - Service Provider

95 - Research and Development

A8 - Nonprofit Organization

VW - Contracts and Grants

### **GOODS / SERVICES**

#### **North American Industry Classification System (NAICS)**

115310 - Support Activities for Forestry

541370 - Surveying and Mapping (except Geophysical) Services

541620 - Environmental Consulting Services

541690 - Other Scientific and Technical Consulting Services

#### **Standard Industrial Classification (SIC)**

8999 - SERVICES, NEC

#### **Product Service Codes (PSC)**

AH91 - R&D-OTHER ENVIRONMENT-B RES

AJ21 - R&D-MATH & COMPUTER SCI-B RES

AJ31 - R&D-ENVIRONMENTAL SCI-B RES

AJ91 - R&D-OTHER SCIENCES-B RES

AP96 - R&D-OTHER NAT RESOURCE-MGMT SU

**Services Offered**

**GIS, Remote Sensing and Mapping**

Advanced Spatial Analysis  
Vegetation Community Modeling and Mapping  
Habitat Suitability Modeling and Mapping  
Future Scenarios Modeling and Mapping  
Customized Environmental Mapping

**Ecology, Forestry, Wildlife Science**

Botanical Inventories  
Rare Species Inventories  
Vegetation Community Assessments  
Rangeland Health Inventories and Assessments  
Forest Health Inventories and Assessments  
Ecological Health Assessments  
Wildlife Biology and Wildlife Habitat Assessments

**Conservation Planning and  
Resource Management**

Wildfire Behavior Analysis  
Forest Health Prescriptions  
Grazing Effect Analysis  
Conservation Decision Support Systems  
Development Impact Analysis  
Spatially Explicit Conservation Prioritization

**Project Facilitation and  
Management**

Coordination of Multiple Disciplinary Personnel  
Scientific/Environmental Data Management  
Technical Report Writing  
Environmental Education Outreach,  
Content Development and Public Relations

### ***Spatial Analysis and Remote Sensing***

Pacific Biodiversity Institute is a leader in applying spatial analysis and remote sensing to natural resources and conservation issues. Pacific Biodiversity Institute maintains an advanced spatial analysis and remote sensing lab at our office in Winthrop, Washington. In our lab, we retain a vast spatial data library of both current and historical GIS data, satellite imagery, aerial photography, LIDAR imagery, and ground-truth data. In addition to advanced GIS services, we provide high-quality map printing and cartographic services. We can provide large format customized maps.

Pacific Biodiversity Institute has received the highest international award given in the GIS field, Environmental Systems Research Institute's "**GIS Special Achievement Award.**" This award is given to a only a few organizations and businesses around the world that represent the most advanced state of professional work in GIS and landscape analysis.

### ***Ecology, Botany, Forestry, Wildlife Science***

Our staff and consultants have a keen understanding of the natural sciences and natural resource management. We have natural science educations and extensive work histories in ecology, botany, forestry, and wildlife science. Collectively, we have applied our expertise across many different landscapes, ecosystems and projects. We have extensive expertise in botanical inventories, rare plant surveys, and invasive species surveys. We have conducted inventories of wildlife habitats, vegetation and imperiled species across the Americas. We excel at field science operations, ranging from simple resource inventories to complex habitat and ecological condition evaluations.

### ***Conservation Planning and Resource Management***

Many agencies and organizations have selected Pacific Biodiversity Institute to assist them in conservation planning and resource management efforts. Combining our expertise in spatial analysis, data management, and the natural sciences, we are able to provide a host of support activities to our partners that can help make planning and management decisions clear.

Drawing on our technical expertise and project history experience, we can provide resource planning and management services suited to a wide variety of topics, including: wildfire risk reduction, habitat restoration, forest health prescriptions, rangeland grazing prescriptions, land acquisition and conservation easement prioritization, and development impact analysis.

### ***Project Facilitation and Management***

Many of our project endeavors require us to provide additional professional services beyond the scope of a specific scientific expertise. To be successful in our project endeavors, we have had to excel at coordinating multiple disciplinary personnel, scientific/environmental data management, and technical report writing. We have also undertaken projects for clients that require environmental education outreach and content development for public review.

## Abbreviated Project History

- Assisted the **Colville Confederated Tribes** in preparing a new Integrated Resource Management Plan (IRMP).
- Western gray squirrel conservation project in the Methow Valley in partnership with the **Washington Department of Fish and Wildlife**.
- Wildlife habitat and developments impact assessment at Mount Spokane State Park - **Washington State Parks and Recreation Commission**
- Inter-agency beaver habitat analysis and site release prioritization in the Methow Sub-basin - **The Methow Conservancy, USFS, and WDFW**
- Inventory and mapping of noxious plant species in 3 municipal watersheds - **Seattle Public Utilities**
- Technology assistance to non-profit conservation organizations establishing parks and biodiversity reserves in Chile and Argentina - **Parques Para Chile**
- Vegetation community mapping and rare plant surveys in 4 Oregon State Parks - **Oregon Parks and Recreation Department**
- Forest health, wildlife habitat modeling, and wildfire risk assessment and planning in Mount Spokane State Park - **Washington State Parks and Recreation Commission**
- Vegetation community mapping and rare plant surveys in the Methow Wildlife Area - **Washington Department of Fish and Wildlife**
- Development of ecological and biological data for a comprehensive Conservation Needs Assessment of the Methow River Basin. - **The Methow Conservancy**
- Vegetation community mapping and rare plant surveys in 66 Washington State Parks - **Washington State Parks and Recreation Commission**
- Ecological characterization, mapping and assessment of native grass assemblages and xeroriparian areas in the Sonoran Desert - **The Nature Conservancy, US Bureau of Land Management, Department of Defense**
- GIS and remote sensing based ecological classification of the Upper Columbia Evolutionarily Significant Unit for spring chinook salmon and summer steelhead trout - **Bonneville Power Administration (BPA) and Upper Columbia Salmon Recovery Board and North Central Washington Resource Conservation District (NCW RC&D)**
- A series of studies of the major wildfires during 2000, 2001 and 2002 focusing on the factors with contributed to the fires including past landscape condition - **Grant Funded Projects**
- Assessment of the ecological condition of natural communities in the Sonoran Desert - **The Nature Conservancy, US Bureau of Land Management, Department of Defense, and the Tohono O'odham Nation**
- Development of a GIS based conservation decision support system for use in the Wenatchee River Sub-basin - **The Icicle Fund**
- Development of an improved vegetation map for the Wenatchee River Basin - **The Icicle Fund**
- Mapping of vegetation for a research project on bear habitat in the Washington Cascades - **United States Forest Service**

We can provide representative reports, work samples, GIS datasets, and/or project summaries for any of the projects listed above upon request.

## Featured Project Summaries

### ➤ **Integrated Resource Management Plan (IRMP) Consulting and Writing (2013-2014)**

Client: Colville Confederated Tribes  
Point of Contact: Kodi Jo Jaspers  
Colville Confederated Tribes Wildlife Department  
PO Box 150, Nespelem, WA 99155  
Phone: (509) 634-2115, Email: KodiJo.Jaspers@colvilletribes.com

Services Required: Project Manager, Wildlife Biologist, Ecologist, GIS Analyst, Writer/Editor

Project Team: Kim Romain-Bondi, George Wooten, Peter Morrison, Katrina Fisk, Sarah Knudsen

Project Summary: We are helping the Colville Confederated Tribes to prepare a new Integrated Resource Management Plan (IRMP). This strategic plan guides all natural resources management decisions on the Colville Reservation. PBI is responsible for researching and writing the wildlife management section of this plan. We are preparing a management plan based on the best available science, and conducive to a healthy and balanced ecosystem where key wildlife species can thrive. With the scope of the project ranging from the high peaks of sacred Moses Mountain to the waters of the Okanogan, San Poil, Nespelem and Columbia Rivers, the wildlife management plan must consider diverse ecosystems, which range from dry sagebrush-steppe to temperate rainforests supporting cedar, yew and hemlock. The reservation land base covers 1.4 million acres in Okanogan and Ferry counties of Washington State. It occupies a key ecological linkage zone between the Cascade Mountains and the Rocky Mountains. Therefore, wildlife management within the reservation is critical to regional biodiversity.

### ➤ **Vegetation Community and Rare Plant Surveys of 60+ Washington State Parks (2004 – 2009)**

Client: Washington State Parks and Recreation Commission  
Point of Contact: Robert A. Fimbel, Ph.D., Resource Stewardship  
Washington State Parks and Recreation Commission  
7150 Cleanwater Lane, PO Box 42650, Olympia, WA 98504-2650  
Phone: (360) 902-8592, Email: Robert.fimbel@parks.gov

Services Required: Program Manager, Botanist, Forest Ecologist, Rangeland Management Ecologist and Botanist, Writer/Editor, Biological Technician, Geographic Information System (GIS) Analyst and Technician

Project Team: Peter Morrison, George Wooten, Hans Smith, Juliet Rhodes

Project Summary: We conducted botanical surveys and ecological assessments in over 60 Washington State Parks using survey protocols developed by the Resource Stewardship Division of the Washington State Parks and Recreation Commission (WSPRC) for vegetation community and rare plant inventories. Since 2004 we have surveyed and mapped vegetation characteristics on tens of thousands of acres of Washington State Park properties across a broad range of landscapes and ecosystems. For each park surveyed we produced technical reports and GIS data products, providing WSPRC with an extraordinary library of GIS and field-derived information regarding their natural resource elements across the State of Washington.

➤ **GIS and Remote Sensing Based Landscape Classification System of Ecological Indicators for Salmon Habitat in the Upper Columbia Basin (2004 – 2007)**

Clients: Northwest Fisheries Science Center, Bonneville Power Administration  
Point of Contact: Chris Jordan, Ph.D., Program Manager  
Northwest Fisheries Science Center  
2725 Montlake Blvd. East, Seattle, WA 98122-2097  
Phone: (541) 754 4629, Email: [chris.jordan@research.nwfsc.noaa.gov](mailto:chris.jordan@research.nwfsc.noaa.gov)

Services Required: Program Manager, Writer/Editor, Geographic Information System (GIS) Analyst and Technician

Project Team: Peter Morrison, Hans Smith

Project Summary: We undertook the creation of a GIS based landscape classification system to support salmon recovery planning and monitoring efforts by the Upper Columbia ESU Regional Technical Team (UCESU-RTT). We provided to the UCESU-RTT and NOAA Fisheries an extensive list of GIS datasets describing the hydrological, geomorphological, geological, and ecological characteristics of individual stream reaches, sub-watersheds and sub-basins within the Upper Columbia Basin. We provided metadata and a comprehensive technical report detailing our methods and results in creating the foundational data for a multi-scale, ecologically-based landscape classification system for the Upper Columbia Basin. Knowledge of natural sciences, natural resources, advanced spatial analysis and remote sensing coupled with detailed knowledge of existing spatial datasets suitable for depicting hydrological and ecological indicators across such a broad geographic region was required to complete this job.

➤ **Mapping Sensitive Areas in the Methow River Basin through Remote Sensing and GIS Analysis (2005 – 2006)**

Client: Methow Conservancy  
Point of Contact: Jason Paulsen, Executive Director  
The Methow Conservancy  
315 Riverside \* PO Box 71, Winthrop, WA 98862  
Phone: 509-996-2870, Email: [jason@methowconservancy.org](mailto:jason@methowconservancy.org)

Project Team: Peter Morrison, Hans Smith

Resource Areas: Program Manager, Writer/Editor, Ecologist, Remote Sensing Analyst, Geographic Information System (GIS) Analyst and Technician

Project Summary: We were hired by the Methow Conservancy to create a comprehensive map of ecologically sensitive areas to assist their goal of preserving ecologically sensitive habitats, productive agricultural lands, and the rural character of the Methow Valley. We developed a series of GIS datasets about sensitive areas to inform their strategic planning activities. This project required ecological expertise, our knowledge of the best existing data sources for sensitive habitat types, and our ability to process high-resolution aerial imagery, satellite imagery and topography data.

➤ **Natural Community Mapping, Description and Ecological Assessment of the Sonoran Desert National Monument, Arizona (2002 – 2006)**

Clients: The Nature Conservancy Arizona, US BLM  
Point of Contact: Dale Turner, Conservation Planner  
The Nature Conservancy  
1510 East Ft. Lowell Rd., Tucson, AZ 85719  
Phone: 520-622-3861, Email: dturner@tnc.org

Services Required: Program Manager, Botanist, Rangeland Management Ecologist and Botanist, Writer/Editor, Biological Technician, Geographic Information System (GIS) Analyst and Technician

Project Team: Peter Morrison, Hans Smith, Susan Snetsinger

Project Summary: We inventoried and mapped the natural communities of the Sonoran Desert National Monument and some surrounding properties on the Barry Goldwater Air-Force Base, conducted field-based vegetation assessments, described the composition, structure and ecological condition of the natural communities, and provided GIS datasets and reports detailing our findings. This project required advanced GIS analysis and processing of remote sensing data, botanical and ecological surveys, natural resource inventory, creation of rigorous and repeatable survey protocols, establishment of long-term research plots, statistical analysis of field-derived ecological data, technical report writing, and extensive work in a rugged and hazardous backcountry environment.