



Pacific Salmon
Strategy Initiative

Initiative de la Stratégie
relative au saumon du Pacifique



Restoration Center Of Expertise SEHAB - March 2023 Meeting



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada



Agenda

- 1 SEP – Restoration COE
- 2 Why are we Here
- 3 Who are We
- 4 What have we Done

SEP transformation in the context of PSSSI

SEP continues as a program, but is guided by PSSSI mandate and transformative agenda



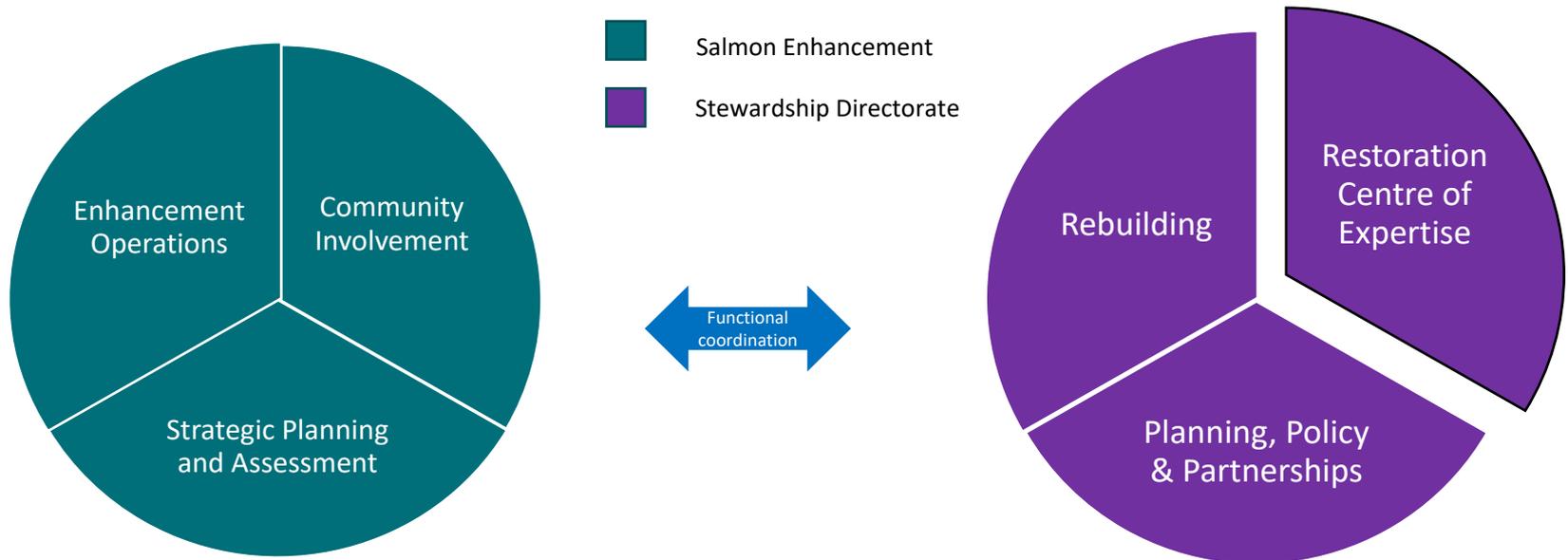


SEP Organization – Pre - PSSI





SEP Organization under PSSI



All program streams in the Enhancement and Stewardship Directorate are considered an expansion of existing SEP



Why are we here?



VÍSIÓN

“To conserve and restore important Pacific salmon populations and their ecosystems, for those who depend on them”



Restoration COE Deliverables

Treasury Board Commitments

Under the Budget 2021 announcement, the *creation of a Centre of Expertise for Salmon Habitat Restoration* was highlighted as a clear deliverable under PSSI to **develop a strategic direction** to support integrated approach to habitat restoration linking actions to long term recovery and conservation of salmon stocks.



We Were Funded To

- **Develop a Center of Expertise for Restoration** led by DFO with expanded management and technical expertise to strategically direct restoration efforts to make long term and measurable differences.
- **Increase opportunities to build partnerships and capacity** in others to contribute to and sustain restoration efforts for Pacific salmon.
- **Improve coordination and transparency** of resources to strategically deliver priority restoration actions.
- **Develop innovative and effective solutions** to restore impaired processes in watersheds and nearshore coastal areas through targeted restoration, experimentation, monitoring and science.
- **Enable adaptive management of restoration** efforts by building shared knowledge and improved understanding of approaches needed to sustain salmon populations through monitoring and research activities.
- **Ensure progress is documented, shared and accessible.**



PSSI – COE Outcomes

Salmon habitat restoration is delivered in a structured and coordinated way

- Develop program structure, roles and expectations of the COE
- Identify and develop strategies, guidelines to support program implementation
- Improve restoration coordination
- Promote and support restoration through engagement and partnerships
- Support effective funding decisions and use of resources
- Change management

Advance habitat restoration actions to support salmon conservation and rebuilding priorities

- Develop tools to improve data collection and analysis, project tracking and reporting
- Establish clear salmon restoration goals, action plans, and methods in priority areas/stocks
- Implement, maintain, and monitor priority restoration projects
- Supports emergency response to environmental disasters to remediate and restore damaged salmon habitat
- Training and capacity building

Salmon habitat restoration efforts are based on science, innovative and effective

- Review state of restoration science to develop and inform assessment frameworks and study designs
- Establish science-program interface for operational delivery to improve scientific collaboration and engagement
- Develop collaborative science and research studies to improve restoration effectiveness
- Implement restoration effectiveness monitoring
- Improve information and knowledge sharing (e.g. communities of practice, techniques)



COE Implementation Planning Process



Key Activities and Deliverables

- Establish scope of change to support transition to COE incl. R&R with other depts and sectors
- Define COE frameworks, strategies protocols
- HR – structure, staffing
- Project management and work planning
- Financial planning
- Develop program strategies to deliver salmon habitat restoration
- Recruit and train new staff
- Design and initiate engagement process
- Engagement and roll out
- Operational fund to support delivery
- Improve restoration planning and prioritization process
- Operational tools to support restoration
- Launch new data and spatial tools to support restoration planning and reporting
- Develop monitoring and reporting products
- Initiate and advance priority projects to support PSSI priorities and direction
- Complete restoration action plans to support PSSI priorities and direction



Salmon Habitat Restoration Centre of Expertise – Results

Salmon habitat restoration is delivered in a consistent and coordinated way

- Pacific Salmon Habitat Restoration Strategy
- Pacific Salmon Habitat Restoration Reporting Framework

Stewardship groups are engaged in salmon habitat restoration planning

- Number of partners engaged in the development of restoration plans
- Number of partners involved in the habitat restoration projects

Salmon habitat restoration actions are targeted towards conservation priorities

- Annual number of salmon habitat restoration activities supported (e.g. monitoring and maintenance)
- Annual measurement (m², km) of area restored targeting salmon populations

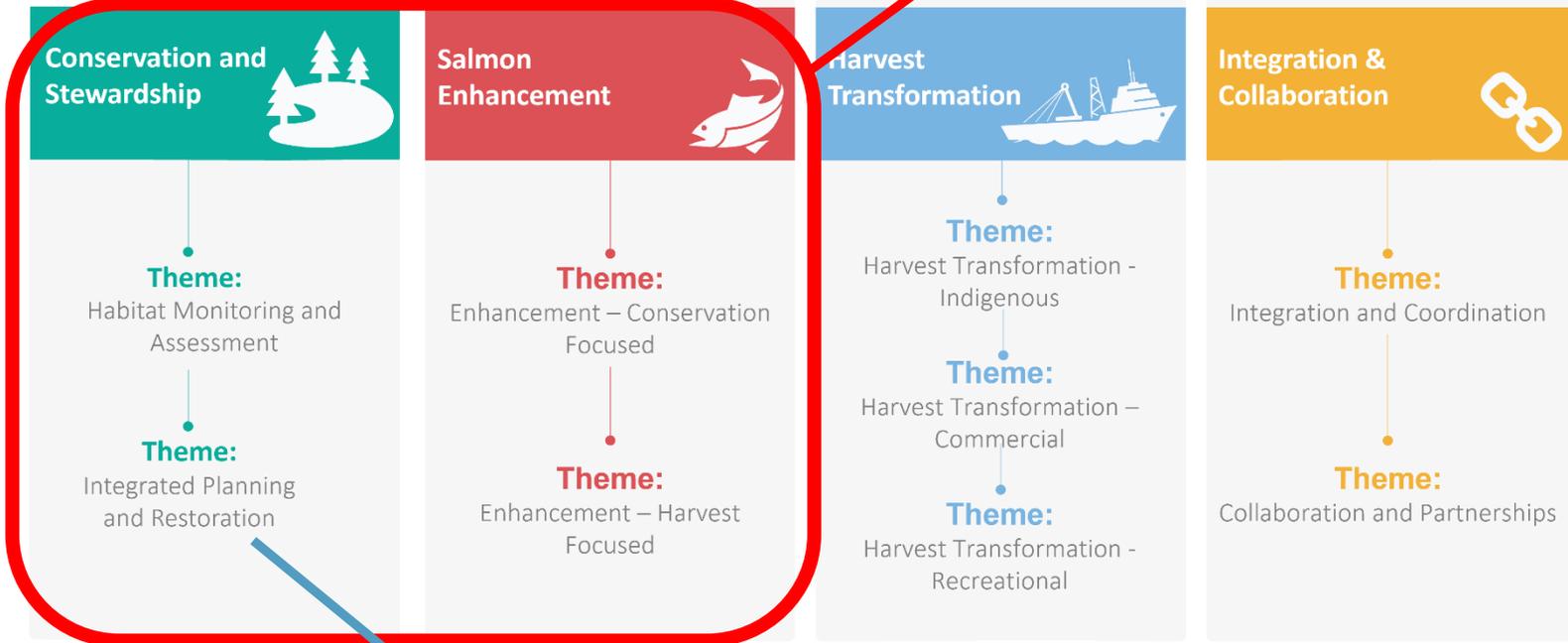


Pacific Salmon Strategy Initiative

PSSI Implementation Framework

SEP Focus = Pillars 1 & 2

Working Vision: Working together to conserve and restore priority Pacific salmon populations and their ecosystems, for those who depend on them.



Restoration COE



Who are we?





Habitat Restoration Centre of Expertise

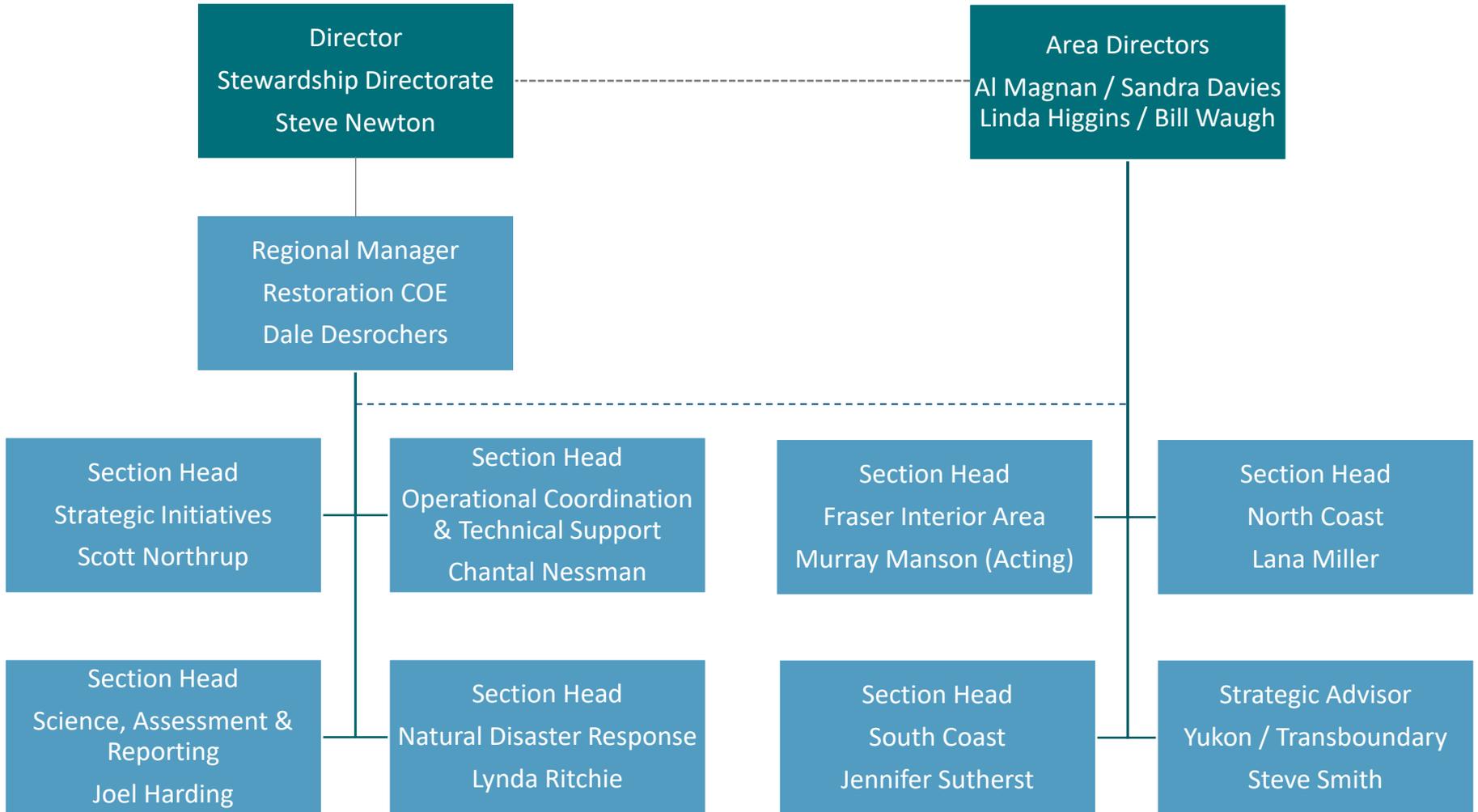
Groups

- *Regional Strategic Support*
 - *Operational Coordination and Technical Capacity*
 - *Assessment and Reporting*
 - *Strategic Initiatives*
 - *Natural Disaster Response*

- *Area Operations Delivery*
 - *North Coast*
 - *South Coast*
 - *Fraser Interior*
 - *Yukon / Trans-boundary*

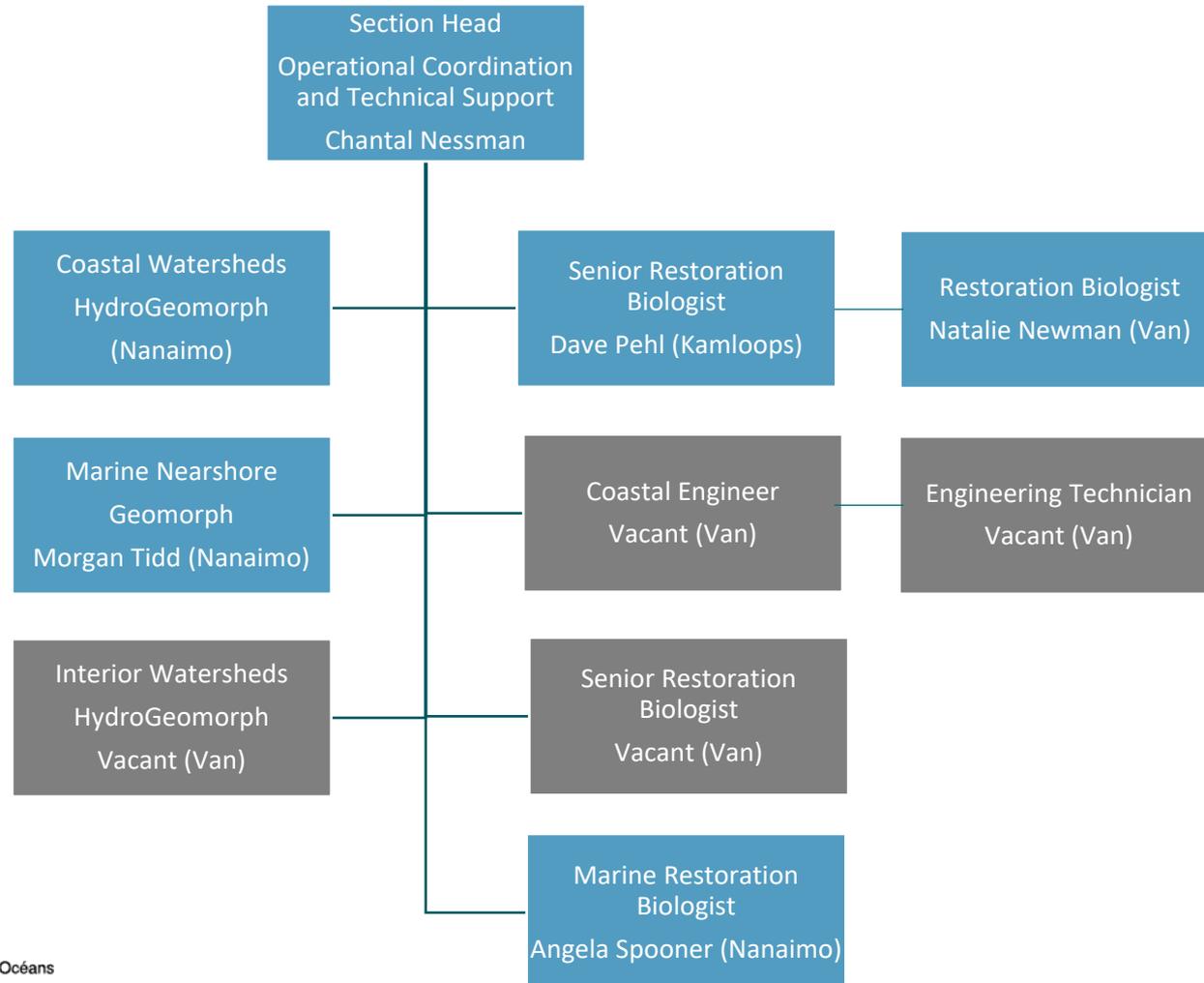


Restoration COE Organization





Operational Coordination & Tech Support





Operational Coordination & Tech Support

Regional Key Deliverables

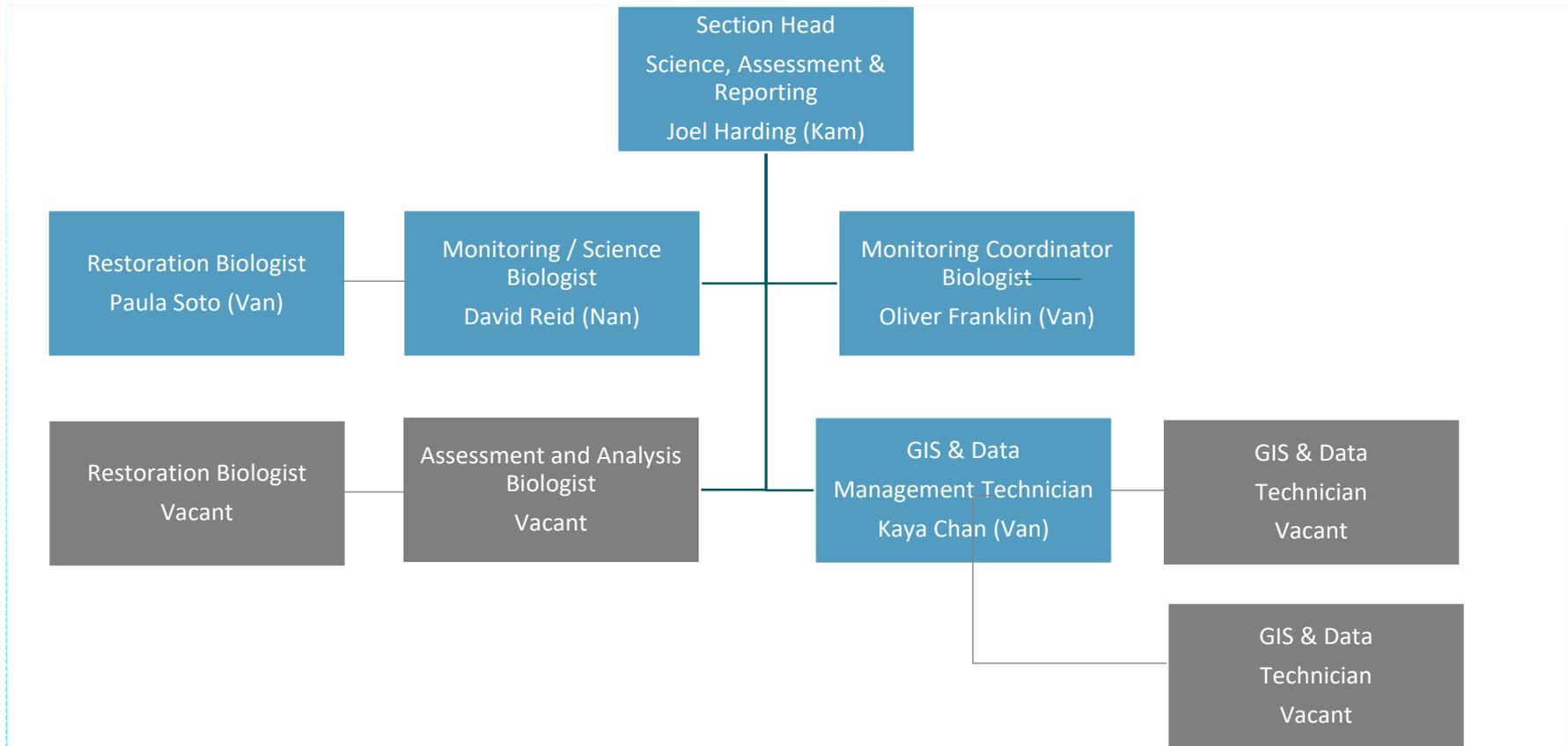
- Improve information and knowledge sharing
- Develop and lead communities of practice
- Develop new Operational tools and techniques to support restoration planning
- Advise area teams with specialized expertise

Area Key Deliverables

- Implement restoration tools and delivery of restoration programs
- Develop and implement Area Restoration Plans



Science, Assessment and Reporting





Science, Assessment and Reporting

Regional Key Deliverables

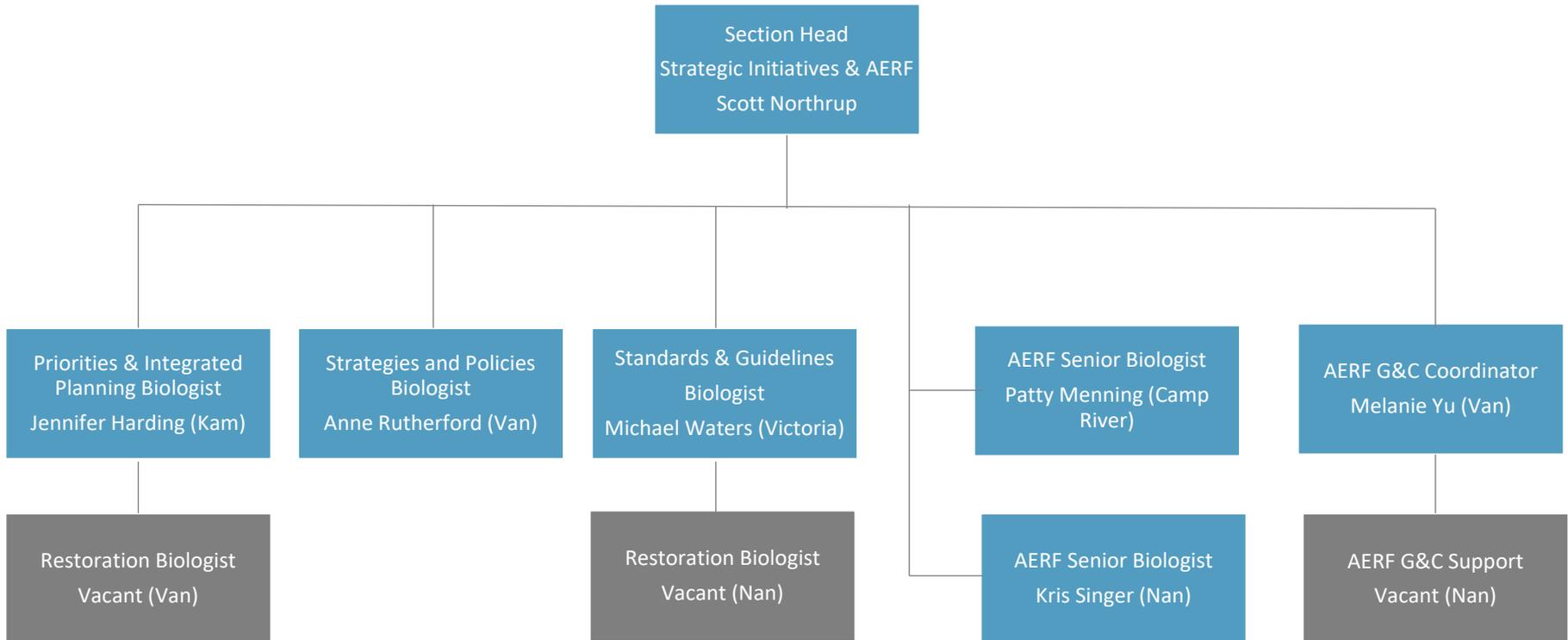
- Develop new data and information management tools to support restoration
- Co-develop new monitoring and assessment programming and restoration effectiveness monitoring
- Deliver regional analyses and reporting products
- Lead integration of science into restoration operations and implement applied research programming

Area Key Deliverables

- Program delivery guided by science
- Co-developing monitoring and assessment programming
- Conduct monitoring and assessment of restoration
- Collect appropriate data and information aligning with area and regional requirements



Strategic Initiatives / AERF





Strategic Initiatives / AERF

Regional Key Deliverables

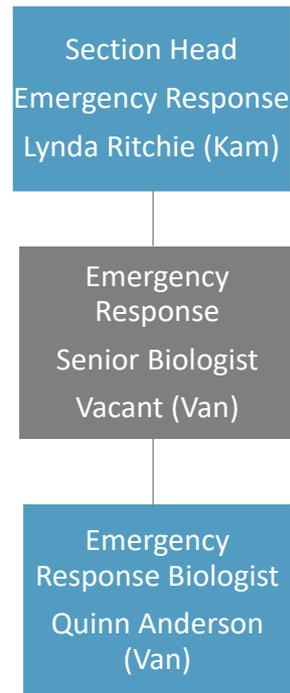
- Develop program strategies to deliver salmon habitat restoration
- Design and initiate engagement processes – Province, States, FNs, FNFC, FFHPP etc.
- Review state of restoration policy and strategies to develop and inform strategic frameworks for Pacific Region
- Develop standards and guidelines to bring consistency and transparency to restoration operations
- Implement Aquatic Ecosystems Restoration Fund

Area Key Deliverables

- Develop restoration programming considering frameworks, policies and strategies developed by SI team
- Deliver programming guidelines and standards
- Work with Regional COE to identify area restoration priorities
- Develop area prioritization plans
- Engage as Subject Matter Expert



Natural Disaster Response





Natural Disaster Response

Regional Key Deliverables

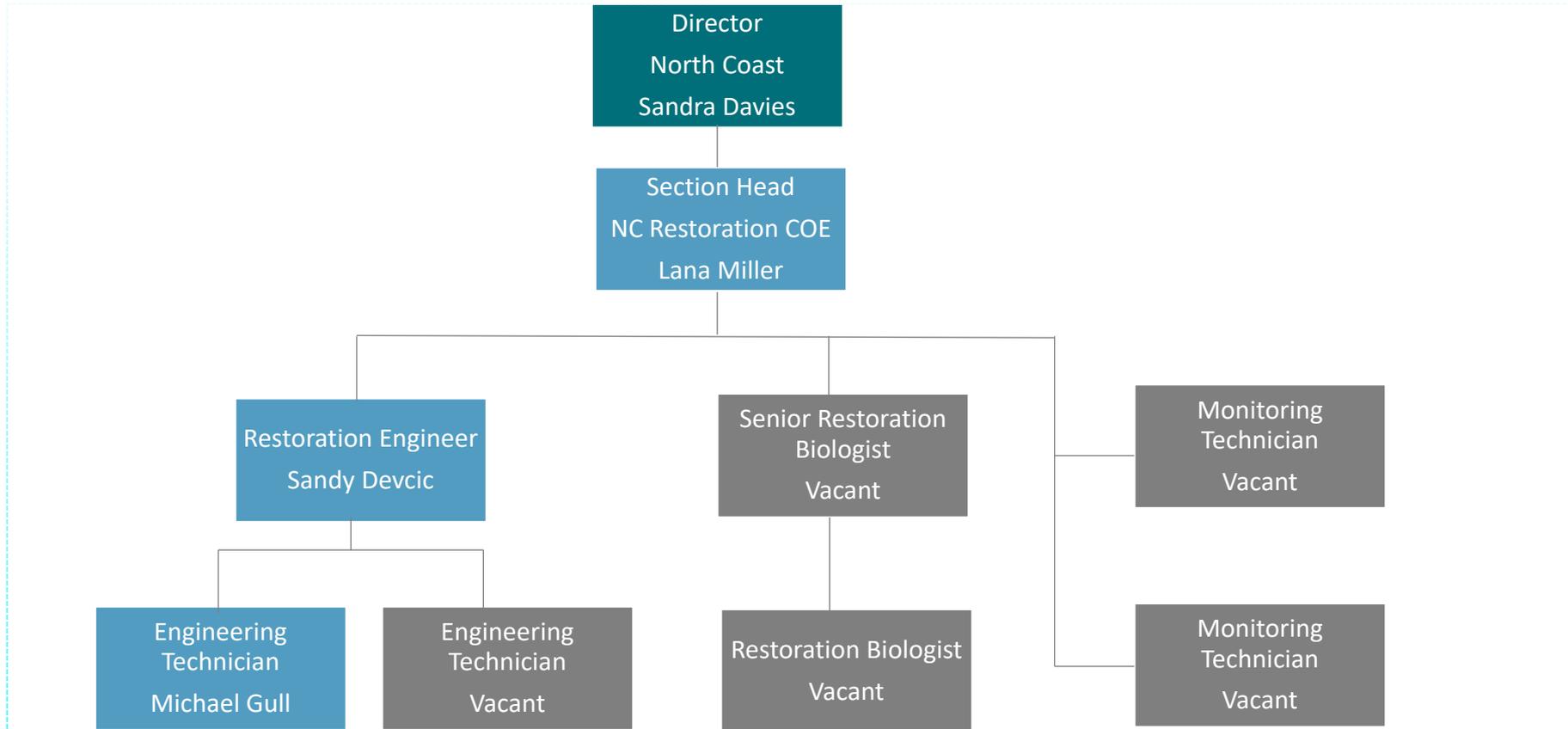
- Represent Restoration COE while participating in natural disaster responses related to flood and drought events
- Lead and support 3G (Government to Government to Government) Response effort for Fraser & Interior Area flood action plan
- Develop enhanced relationships and capacity with Indigenous groups to respond to drought and flood events

Area Key Deliverables

- Participate in Emergence Response Planning forums
- Engage as Subject Matter Expert
- Lead and / or support emergency response restoration activities

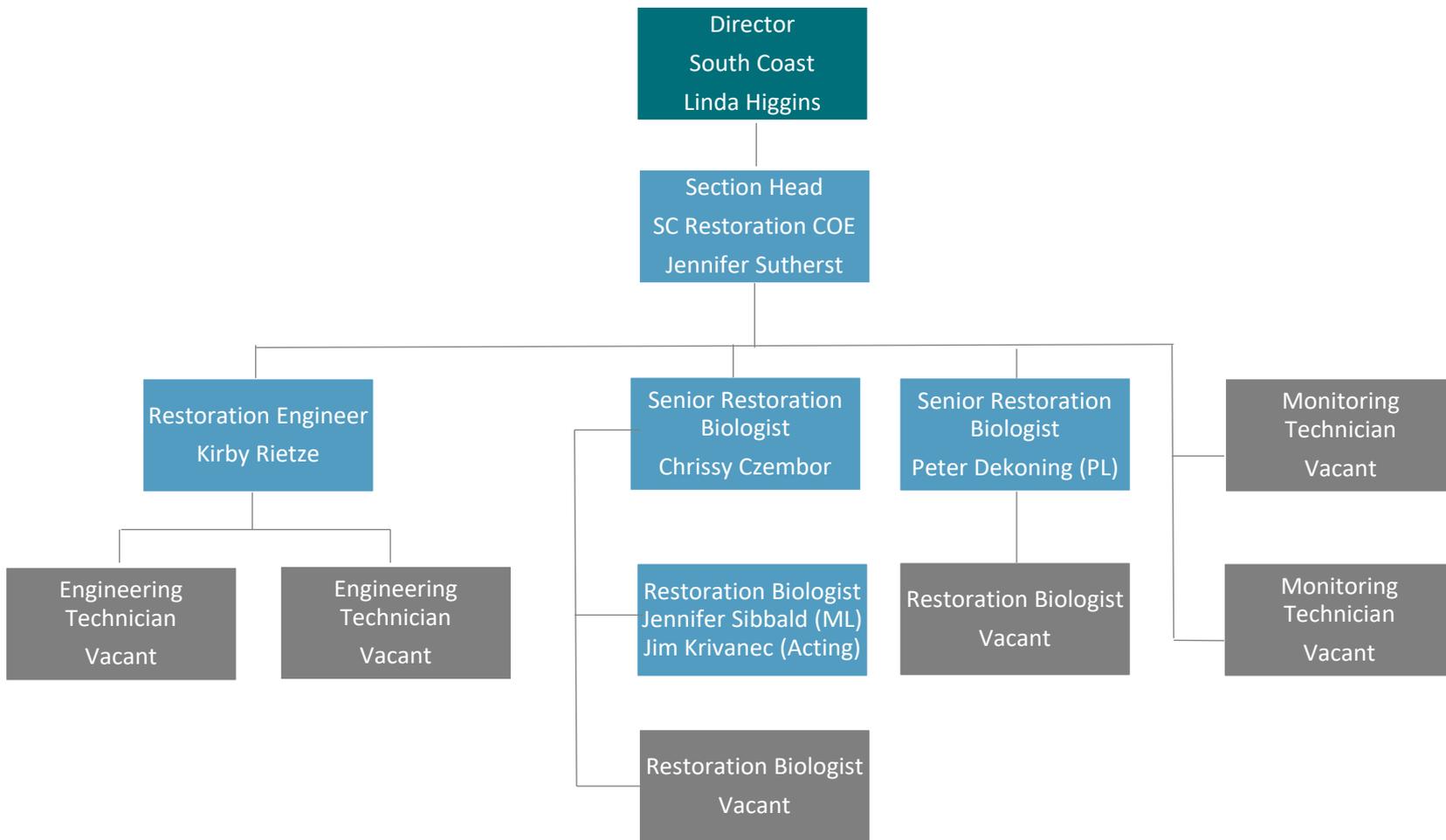


North Coast Area





South Coast Area

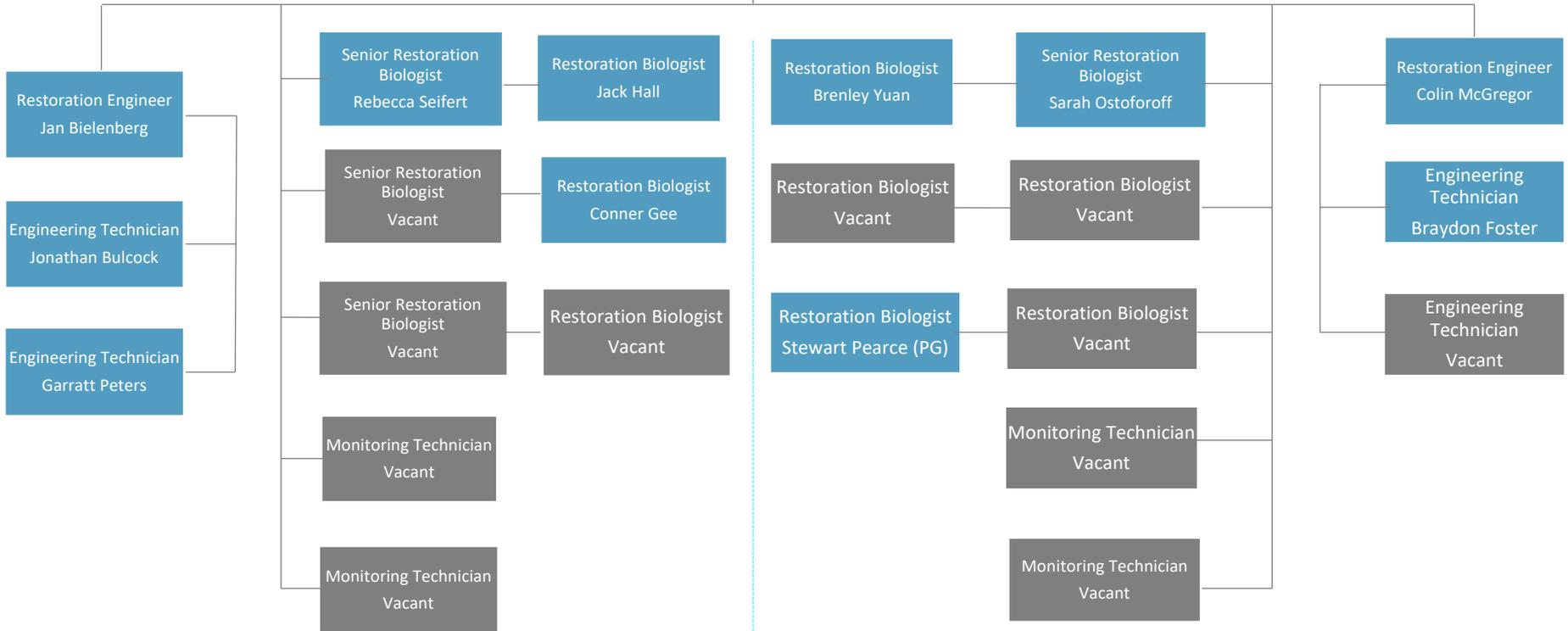




Fraser & Interior Area

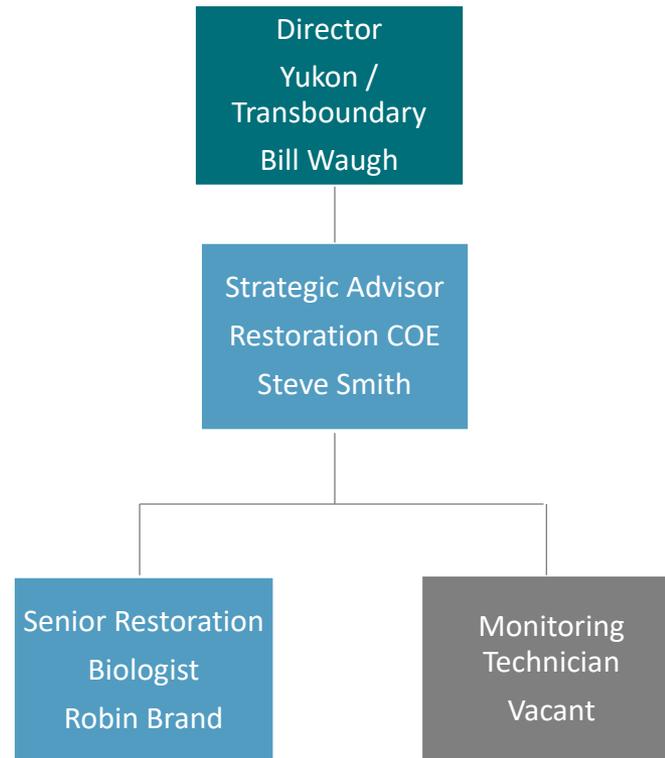
Director
Fraser Interior Area
Alain Magnan

Section Head
FI Restoration COE
Murray Manson
(Acting)





Yukon / Transboundary





What have we done?





Brandt Channel – Before Restoration

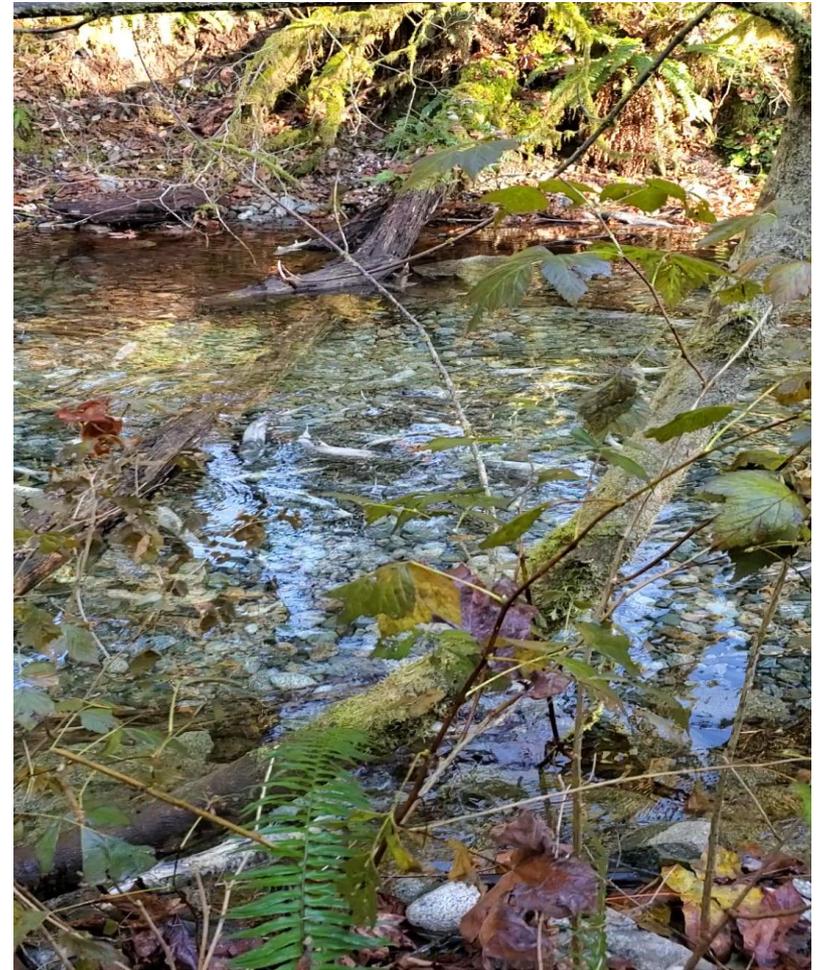
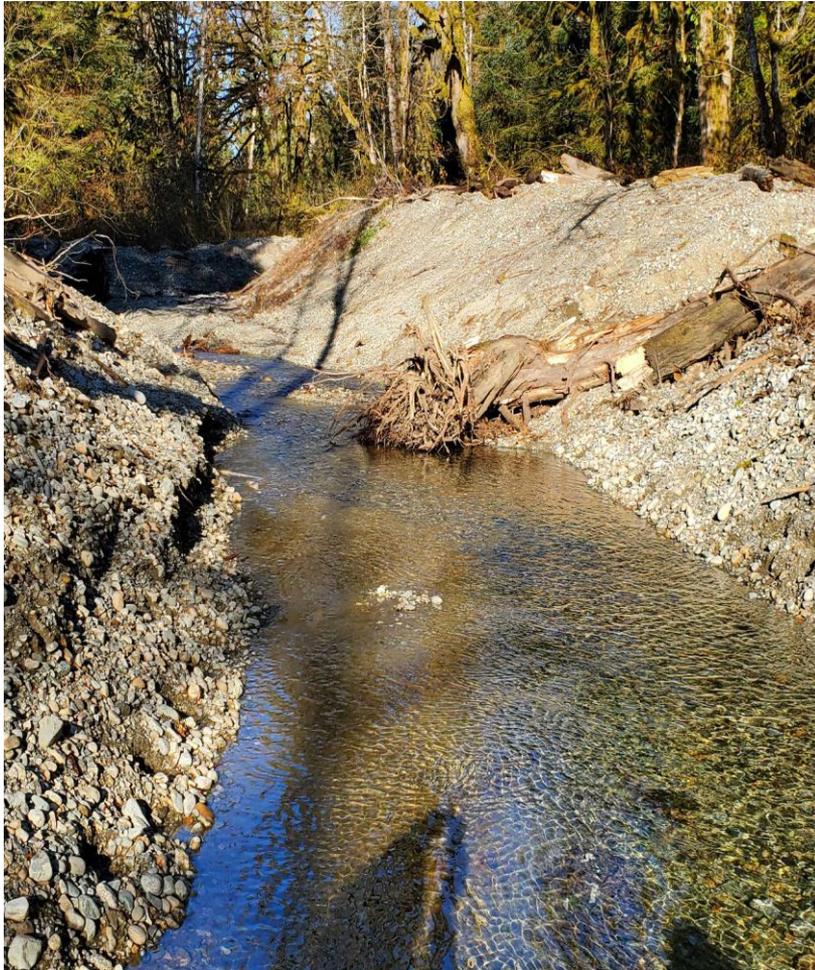


Brandt Channel – Tributary to Indian River
1980 Constructed Groundwater Chum spawning channel
Changes in Indian River Flows deposited approx. 2 meters of sand/gravel





Brandt Channel - After Restoration



Fall 2021 - Worked with Tsleil-Waututh Nation to develop plan
Summer 2022 - Reconstructed outlet and rebuilt upstream where required
Fall 2022 observed chum moving back into channel – 2600 spawned





Upper Pitt River – Alvin Patterson Channel



Fall 2021 - Worked with Katzie Nation and Partners to develop plan for Alvin Patterson Channel extension





Upper Pitt River – Alvin Patterson Channel



Summer 2022 - Constructed sockeye and coho spawning channel
Fall 2022 observed sockeye chum moving back into channel





Restoration Outreach

The screenshot shows a website header with a yellow fish icon and navigation links: STATE OF SALMON, ABOUT US, OUR WORK, LEARN, GET INVOLVED, DONATE, and a search icon. Below the header is a large image of water with salmon. The main content area features the title "KNOWLEDGE EXCHANGE WORKSHOP - RESTORATION MONITORING" and the date "March 14th, 2023 9:00am to 3:00pm PST". A paragraph describes the workshop's purpose: "DFO and PSF are pleased to provide an opportunity to share knowledge on practices and standards for restoration effectiveness monitoring from a diverse panel of researchers, scientists and field professionals working in the Pacific Region and beyond." Below the text is a video player showing "Opening Remarks: Knowledge Exchange Worksho..." by Dale Desrochers, Fisheries and Oceans Canada. The video player includes a "Share" button and a "Watch on YouTube" button. At the bottom of the video player, there is a banner with the text "RESTORATION MONITORING TO ASK QUESTIONS, GO TO SLIDU.COM AND ENTER CODE #RESTORATION" and logos for Fisheries and Oceans Canada and Pacific Salmon Foundation.

Partnering with Pacific Salmon Foundation
November 2022 - Zero Stage Restoration
March 2023 – Restoration Monitoring
3 Knowledge Exchange Workshops planned for 2023/24





Coldwater River Logjam – Before Restoration



2021 Atmospheric Event
Observed Massive Logjam in Coldwater River
2022 Blocked passage of Coho Salmon





Coldwater River Logjam – After Restoration



Summer 2022 - Worked with Scwexmx Tribal Council and Nicola Fish Emergency Response Group to develop plan

Fall 2022 – Removed Woody Debris to provide upstream access
Pooling Coho immediately moved upstream to quality spawning habitat





Thank You