Coordinated Assessments Partnership Strategic Plan

January 1, 2026–December 31, 2030

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1. Coordinated Assessments Partnership Overview

1.1 Mission Statement

The Coordinated Assessments Partnership (CAP) facilitates collaborative data management across tribal, state, and federal partners to support regionally standardized fish and habitat information. Through consensus-based coordination and adaptive technical support, CAP ensures data flows are maintained, improved, and aligned with regional priorities for effective reporting and decision making.

1.2 Vision Statement

The CAP envisions a regionally endorsed, adaptively managed data exchange standard that enables timely delivery of the best available standardized data to managers and researchers for decision-making and scientific analysis.

1.3 General Approach

The CAP facilitates tribal, state, and federal fish biologists and data managers to collaboratively develop consensus-based data exchange standards. Through technical coordination, participants define shared terminology, data structures, and metadata requirements that reflect regional priorities and best scientific practices. Partners exchange data they manage internally and share with regulatory agencies for assessments and reports (e.g., Endangered Species Act (ESA) reviews). This collaborative approach ensures data shared through CAP are timely, transparent, and aligned with regional needs.

1.4 Summary

The CAP was initiated in the Columbia River Basin in 2010 by fish biologists, managers, and decision makers. As of October 2025, Pacific Northwest Aquatic Monitoring Partnership (PNAMP) and StreamNet Program (StreamNet) facilitate CAP activities. These CAP activities involve numerous partners from Tribes, states, federal, and multi-state entities, demonstrating the region's interest in providing data in a consistent and timely manner. The emphasis on Columbia River Basin data reflects direct funding support from Bonneville Power Administration (BPA), which primarily funds projects within that basin. This focus does not imply lack of interest in, or value of, data from other basins.

Funding for CAP's co-sponsors (i.e., StreamNet and PNAMP) originates from BPA, while partner participation is funded by federal entities, tribes, states and tribal consortia as well through their respective BPA projects. CAP's progress has also benefited from in-kind contributions by all partners, as well as direct funding received from National Oceanic and Atmospheric Administration (NOAA) Fisheries and Environmental Protection Agency (EPA) Exchange Network (EN) grants.

The CAP shares natural- and hatchery-origin fish information via the Coordinated Assessments (CA) Data Exchange (CAX), which consists of population- or stock-level estimates, using two

Data Exchange Standards (DESs): Natural Coordinated Assessments (NCA) and Hatchery Coordinated Assessments (HCA). NCA data may be submitted for a superpopulation (groupings of multiple populations), a subset of a population, or an entire population. HCA data are provided at the hatchery facility, program, or stock level. Supporting datasets from Fish Monitoring Data (previously known as StreamNet Trends) are linked to CAX datasets, when available.

Data flow into CAX occurs when data contributors have completed their analyses, formatting, and review to ensure compliance with the DESs. The DESs support data flow between partners and the CAX while advancing metadata quality critical to maintaining dataset value and usability. High-level indicators (HLIs) shared through CAP are accessible via the StreamNet REST API (https://www.streamnet.org/resources/exchange-tools/rest-api-documentation/) and from web-based queries on the StreamNet website (https://www.streamnet.org/home/data-maps/).

2. Goals, Objectives, Strategies, and Milestones

The following 11 goal statements describe the desired long-term outcome from achieving the specific objectives. The strategies specify the actions to accomplish these objectives, and the reporting milestones provide checkpoints used to track progress towards objectives. Milestones are discussed biannually with the StreamNet Steering Committee. Annual progress updates are communicated to the StreamNet Executive Committee, which provides guidance and recommendations to the StreamNet committees and CAP Core Team.

2.1. Maintain, Update, and Automate Existing Data Flows

Objectives
- Support efficient, reliable, accurate, and accessible data sharing across partners and systems
- Prioritize existing data flow maintenance
- Automate existing and additional data flows
- Maintain a high standard for metadata quality
- Refine and improve DES processes
- Encourage adaptive management of protocols and products

Strategies
- Prioritize data sharing for existing natural- and hatchery-origin estimates, including new HLIs.
- Refine and improve processes for existing data flows by identifying, sharing, and implementing efficiencies and modernizations.
- Maintain and link count datasets submitted to Fish Monitoring Data with CAP HLI estimates submitted to CAX.
- Ensure CAP data transparency and accessibility via the CAX.

- Support collaboration and engagement through the StreamNet Technical Team to identify and implement improvements.
- Support collaboration and coordination on CAP HLI through CAP Core Team meetings, CAP workshops, Technical Team meetings, and CA DES Development Team (DDT) meetings.
- Encourage dialogue to improve data usability and relevance across partner organizations.
- Implement adaptive management to modernize and improve data flow, documentation, and accessibility.

Milestone: Data Flow Coordination Established
- Convene the StreamNet Technical Team and CA DDT at least twice a year to review and compile data flow updates.

  Note: for this milestone, progress update to the StreamNet Executive Committee during their annual meeting is limited to challenges/obstacles identified by the Steering Committee. If no concern has been identified, no annual update is provided.

2.2. Maintain and Refine Existing Data Exchange Standards (DESs)

Objectives
- Ensure metadata accuracy and completeness
- Document and version control DES updates
- Facilitate collaborative development, revision, and publication of DESs in machine-readable formats
- Support strategic expansion of DES scope to meet data priorities

Strategies
- Regularly update CA system and develop new DES components to meet emerging priorities.
- Maintain up-to-date metadata for all DES tables to support consistent data interpretation, including documentation of data sources, transformations, and assumptions to support transparency and reproducibility.
- Include automated data validation rules at the field level, including both data and metadata fields, and conduct biannual quality assurance/quality control (QA/QC) per the StreamNet Quality Assurance and Quality Control Plan version February 7, 2022.
- Develop and publish clear documentation for each DES version, including field definitions, data types, and import/export protocols. Ensure the most current and historical DES versions are publicly available and easily accessible via the StreamNet website and other platforms.
- Engage multidisciplinary teams through the PNAMP's Fish Monitoring Work Group (FMWG) and the CA DDT to inform DES development and revisions.

- Conduct targeted scoping exercises to identify and evaluate new data categories (Appendix B) for potential inclusion in DES.

Milestone: DES Maintained and Expanded
- StreamNet Technical Team and CA DDTs review twice a year the data exchange between providers and the CAX system

Note: for this milestone, progress update to the StreamNet Executive Committee during their annual meeting is limited to challenges/obstacles identified by the Steering Committee. If no concern has been identified, no annual update is provided.

2.3. Sustainable Modernization, Security, and Maintenance

Objectives
- Maintain modern data infrastructure
- Ensure data exchange standards are current and interoperable
- Improve efficiency of data queries
- Modernize exchange tools to enhance usability and integration
- Establish a sustainable maintenance cycle
- Automate data summarization
- Maintain the accuracy and reliability of data, preventing tampering or deletion

Strategies
- Conduct regular assessments of existing data systems to identify outdated components and prioritize upgrades.
- Support effective data access by optimizing query performance, developing user-friendly query interfaces, and providing training and documentation.
- Integrate APIs and web services to support automated data exchange and real-time updates.
- Ensure tools are compatible with multiple platforms and devices, including mobile devices.
- Solicit feedback from data providers and users on data systems, queries, and data exchange tools to discuss evolving technology/software and emerging needs.
- Create a schedule for regular updates, including version control and release schedules that are compatible with StreamNet and data provider resources.
- Allocate staff and funding for ongoing maintenance and modernization of data providers' internal systems, exchange tools, and PSMFC CAX systems.
- Provide staff with opportunities to remain up-to-date on modern data infrastructure, query tools, and data exchange tools.
- Make DESs machine-readable.
- Create repeatable processes for generating HLI summaries using standardized inputs and formats.

- Implement measures to safeguard data from threats, including unauthorized access and cyberattacks.

Milestone: Infrastructure and Operations Secured, Sustained, and Enhanced
- Provide training and documentation to data providers and users to sustain regional data exchange operations.
- The StreamNet Technical Team will review infrastructure and operational needs, successes, and failures twice annually. These meetings include the Columbia Basin Fish & Wildlife Library and PSMFC GIS Program that support CA and StreamNet operations.
- The StreamNet Technical Team and CA DDT will identify opportunities to reduce manual effort and improve security and automation.
- Enhance data flow reliability within a partner's internal data management and flow processes with the CAX.
- Summarize technological advancements, their implementation, and associated resources annually.

Note: for this milestone, progress update to the StreamNet Executive Committee during their annual meeting is limited to challenges/obstacles identified by the Steering Committee. If no concern has been identified, no annual update is provided.

2.4. Interoperability with Other Data Systems

Objectives
- Establish data linkages
- Promote accessibility of data and metadata through machine readable formats
- Enhance regional data standardization
- Ensure data traceability when exchanging with other data systems

Strategies
- Map relationships between datasets to enable integrated metric summaries.
- Align CAP DESs with other data systems housing complementary data (e.g., PIT Tag Information System (PTAGIS), Regional Mark Information System (RMIS)).
- Facilitate connecting CAP data to protocol and method documentation by automating connections to content in MonitoringResources.org.
- Deliver information in machine-readable formats (e.g., DES, JSON, CSV) with controlled vocabularies to facilitate usage by other data systems.
- Promote the use of controlled vocabularies and machine-readable formats through training, documentation, and outreach.
- Coordinate with systems and projects to leverage standards across systems (e.g., RMIS, PTAGIS, Rotary Screw Trap dashboard, Fish Passage Center (FPC), Salmon Data Discovery Tool, and Data Access in Real Time).

- Enhance data linkages and cross-system standardization by documenting the reasons when efforts fail (e.g., data incompatibility, lack of metadata) to inform future improvements.
- Support data traceability by providing and capturing associated metadata with data exchanges.

Milestone: Data are communicated accurately and understood by participating systems
- Review operation and usage of the StreamNet REST API by the StreamNet Technical Team, StreamNet DDT and CA DDT during joint meetings.
- Track integration efforts and document barriers to inform future improvements.

  Note: for this milestone, progress update to the StreamNet Executive Committee during their annual meeting is limited to challenges/obstacles identified by the Steering Committee. If no concern has been identified, no annual update is provided.

2.5. Develop Strategic Guidance for Data Preservation and Visibility Protocols

Objectives
- Rescue and curate legacy data
- Enhance data discoverability and reuse via human- and machine-readable formats
- Advance FAIR (Findable, Accessible, Interoperable, Reuseable) and CARE (Collective benefit, Authority to Control, Responsibility, Ethics) data principles
- Develop citation and visibility guidelines
- Convene collaborative workshops to develop guidance

Strategies
- Identify and inventory legacy datasets and utilize CAP Core Team to prioritize and recommend datasets to be preserved as resources allow.
- Establish protocols for metadata enhancement to support discoverability and long-term preservation.
- Promote transparency, reproducibility, and public accessibility of curated datasets in alignment with data sovereignty, while also providing training and outreach relative to the FAIR and CARE data principles.
- Create citation and visibility guidelines by creating standardized citation formats for aggregated datasets and developing recommended practices for increasing dataset visibility in publications, repositories, and portals.
- Host workshops to co-develop citation formats, metadata templates, and preservation protocols. Co-develop and implement joint data projects. Document and share best practices for integrating Tribal data into regional systems.

Milestone: Public Data Are Secured and Accessible

- Track usage statistics, citations, and stakeholder feedback to evaluate return on investment and inform improvements to these tools.
- The CAP Core Team will develop and maintain a prioritized list of datasets to be preserved by 2030.
- Develop citation guidelines for CAP data sets by 2030 and FAIR/CARE principles are implemented as feasible.

2.6. Pacific Northwest Data Priorities are Addressed

Objectives
- Ensure alignment with Pacific Northwest priorities, as identified by CAP partners
- Promote early engagement on new DESs
- Engage subject matter experts
- Align with existing regional standardization
- Complete an annual strategic review to inform alignment with priorities

Strategies
- Revise guidance annually to reflect new data priorities and data sharing needs approved by the StreamNet Executive Committee.
- Scoping exercises are led by CAP Core Team or PNAMP's FMWG to determine feasibility and appropriateness of developing a new DES to address the new data needs following the [Data Exchange Standard Development and Revision Procedures](#) (version 2021).
- Secure endorsement from the StreamNet Executive Committee before initiating work.
- Confirm that all relevant parties are informed and supportive of proposed work and have the capacity to engage in DES development or revision processes.
- Coordinate subject matter experts to guide the identification, development, and refinement of indicators and DES via the PNAMP FMWG.

Milestone: CAP Aligns with Pacific Northwest Needs
- Annual review of the CAP Strategic Plan by the StreamNet Executive Committee meeting, will consider staff summary of:
  a. Team meetings, action items, and progress towards completing tasks or realizing deliverables.
  b. Data flow maintenance, improvements, or problems encountered including updated record counts in the CAX and QA/QC results.
  c. Existing data exchange categories and capacity for new data categories to align with regional priorities.
- Conduct regular survey of partners for identification of needs, at least once prior to each CAP workshop.

2.7 Strengthen Tribal Engagement Capacity to Facilitate Equitable Participation in Regional Data Initiatives

Objectives
- Support tribal data sovereignty and governance
- Encourage tribal representation and facilitate participation
- Improve non-tribal awareness and understanding of
- Promote mutual learning and foster cultural competency among regional partners.

Strategies
- Collaborate with Columbia River Inter-Tribal Fisheries Commission (CRITFC) Inter-Tribal Monitoring Data (ITMD) Project and other leads to identify data ownership, access, sharing preferences, and promote the use of Tribal data governance frameworks in regional data initiatives.
- Convene coordination meetings with CRITFC ITMD Project staff and tribal data leads to ensure transparency and responsiveness.
- Encourage tribal leadership and representation in decision-making bodies (e.g., StreamNet Steering Committee and CAP Core Team) to foster shared governance and mutual accountability.
- Maintain open invitations to tribal entities to participate in StreamNet Executive Committee dialogue to ensure diverse perspectives on data exchange decisions.
- Fund tribal data stewards to participate in CAP processes and CAP HLI related data management and exchange with StreamNet, when feasible.
- Leverage the CRITFC ITMD Project as a coordination and support mechanism to facilitate participation by member tribes in CAP, ensuring alignment with their priorities and data protocols.
- Evaluate and improve collaboration practices with tribal partners to identify successes, challenges, and areas for improvement.
- Provide assistance and capacity-building opportunities.
- Identify training opportunities on tribal history, sovereignty, and cultural perspectives related to fisheries and data by creating opportunities for shared learning among agencies and tribal staff.

Milestone: Tribal Engagement Strengthened
- Conduct annual reviews to track engagement (meeting attendance, data exchanged, requests), identify challenges, and inform improvements.
- Annually review training opportunities and needs to resolve identified challenges within CAP as it relates to Tribal engagement.
- Review direct support opportunities for staff and infrastructure funding to promote equitable engagement in CAP.

2.8 Promote Sustainable Knowledge Sharing

Objectives
- Create a comprehensive collaborative framework
- Encourage reuse of tools and content
- Facilitate adherence to best practices

Strategies
- Develop user-sharing agreements that address access, privacy, ownership, and security requirements built on trust and recognition of data ownership and sovereignty.
- Create a unified best-practices repository for sharing solutions, best management practices, software applications, code, and scripts across partner agencies.
- Identify or develop sustainable knowledge-sharing training or resources.

Milestone: Sustainable Knowledge Sharing
- Establish and maintain a shared best practices, solutions, and tools library or repository by 2030.
- Track annual training and resources taken, developed, or shared, including workshops, videos, documents, repository of shared best management practices, software applications, code, and scripts.

2.9 Advance Awareness of Coordinated Assessments Partnership

Objectives
- Enhance engagement and usage of the data exchange and associated standards and protocols
- Leverage existing communication channels
- Represent and promote awareness about CAP

Strategies
- Utilize established communications (e.g., PNAMP newsletter, PNAMP and StreamNet websites, and the Columbia Basin Fish & Wildlife Library) to share CAP updates, DES releases, and collaboration opportunities.
- Promote awareness of data systems, processes, and improvements through presentations and documentation using the PNAMP and StreamNet coordination networks and at professional conferences and meetings.
- Attend data coordination forums to represent CAP, promote awareness, gather input on data needs, and present products and decisions.

Milestone: CAP Visibility Enhanced

- Track conference participation and engagements.
- Document and summarize the PNAMP, StreamNet, and other CAP partners' outreach activities related to CAP.
- Maintain and update the CAP information on the StreamNet and PNAMP websites as necessary. Summarize Website usage statistics to inform improvements.
- Publish a CAP article in the PNAMP newsletter, at least annually.
- Annually assess changes in participants (individuals and entities) based on retention and recruitment in CAP related committees, teams, workshops, and FMWG task groups.

2.10 Effective Coordination and Communication Among Partners

Objectives
- Regularly communicate, and maintain collaborative processes with key partners to promote structured and inclusive practices
- Support a consistent point-of-contact
- Cultivate transparency and documentation

Strategies
- Convene CAP Core Team meetings and StreamNet Executive Committee regularly to guide strategic direction and ensure alignment of data priorities while engaging partners.
- The CAP Core Team coordinates implementation of CAP priorities, as identified by the StreamNet Executive Committee, by elevating these to the StreamNet Steering Committee for sequencing.
- Rotate facilitation of CAP Core Team meetings to ensure shared ownership among partners including NOAA, state agencies, tribes, and other potential partners such as academia.
- Establish a consistent point-of-contact and documentation protocol for feedback tracking and implementation as part of CAP's process.
- Promote transparency and accountability by maintaining documentation on the StreamNet webpage.
- Document CAP and StreamNet related meeting participation, discussions, and action items and, as appropriate, post on the website and within member-accessible folders.
- Workshops, committees, and team meetings are scheduled to maximize attendance by all partners.

Milestone: Partnership Coordinated
- The CAP Core Team reviews meeting documentation annually to assess participation accessibility to all partners.
- List of point of contacts is established and identified on accessible materials by 2030.

- Annually review feedback and implementation results.

2.11 Track CAP Data Usage

Objectives
- Understand usage of CAP data and how to best support that usage

Strategies
- Track CA data usage in reports, management decisions, or publications.
- Analyze data access and download statistics from CAX.
- Create citation guidelines that recommend including Digital Object Identifier (DOI) or other persistent identifiers to facilitate tracking usage of CAP datasets.
- Survey and review regional entities using CA data to inform management decisions and project evaluations.
- Promote best practices for DOIs.

Milestone: CAP Data Are Referenced with Persistent Identifiers
- Maintain a version registry to support reusability of CAP data used in data tools and reports.
- Establish an internal persistent DOI for datasets to aid traceability and provenance by 2030.
- Annually track website usage metrics for CAP pages and CAP queries.

3. Implementation Approach

3.1 Approach and Process

The following is a general overview of the process used to assess progress towards achieving milestones and eventually CA goals:

StreamNet Steering Committee Reviews and Makes Recommendations to StreamNet Executive Committee - Progress on the 11 goals will be evaluated annually at the StreamNet Steering Committee's fall meeting by reporting on the milestones. If a milestone is not realized, recommendations from that review will be summarized and presented to the StreamNet Executive Committee at their annual meeting. The content presented will include descriptions of the challenges that contributed to not achieving the milestone(s) and progress towards its related goal. It is envisioned that this discussion will result in feedback and guidance from the StreamNet Executive Committee.

Implementing StreamNet Executive Committee Guidance - Guidance and action items from the StreamNet Executive Committee will be discussed with the StreamNet Steering Committee and the CAP Core Team. The PSMFC staff and/or the StreamNet Steering

Committee will identify items to be assigned to the StreamNet Technical Team, StreamNet DDT and CA DDT for implementation, as well as items to be recommended to the PNAMP FMWG, CAP Core Team, CAP Workshop and in cooperation with the Columbia Basin Fish & Wildlife Library and the CRITFC ITMD Project.

Annual Review of CA Strategic Plan - The CA Strategic Plan will be reviewed annually by the StreamNet Executive Committee. The CAP Core Team will perform an in-depth review of all objectives, strategies, and milestones to inform revision of the CAP Strategic Plan. Suggested updates will be provided by the StreamNet Steering Committee and StreamNet staff. The suggested updates take into consideration progress, achievements, and challenges. Input from data providers, data consumers, workshop participants, and others will be used to inform task prioritization, outreach and training materials, and workshop development.

3.2   Organizational Structure

As of October 2025, CAP is co-sponsored by PNAMP and StreamNet, with implementation relying on the support and expertise of federal, tribal, and state partners, and the CRITFC's ITMD Project (Figure 1). The CAP's CAX data system also relies on the Columbia Basin Fish & Wildlife Library to provide access to documents and reports that contain contextual supporting information for data sets, as well as on PNAMP's MonitoringResources.org for access to standardized protocols and methods. The CAP partners represent entities engaged in providing and managing the HLI data shared through the CAX and the regional entities relying on these HLIs for their decision-making processes and reporting. Due to the public accessibility of data in StreamNet and CAP, data providers do not submit data they legally identify as sensitive. As the scope of CAP expands to encompass more of the Pacific Northwest and additional topics, the collaborative structure will reflect that expansion. The CAP was initially guided by a 5-year plan which has been replaced by this strategic plan.

Implementation of CAP is guided by the CAP Strategic Plan, which is reviewed annually by the StreamNet Executive Committee to ensure alignment with regional priorities. The StreamNet Executive Committee includes Columbia River Basin representatives of CAP's participating entities and provides high-level policy guidance to the StreamNet Steering Committee. The StreamNet Steering Committee contributes to CAP implementation and guides the work of the StreamNet Technical Team and DES Development Team. The overarching CAP Core Team coordinates implementation of CAP tasks among CAP partners, including StreamNet participants.

Data in CAP are maintained and shared via CAX which is hosted by StreamNet at PSMFC. The PNAMP facilitates discussions and activities needed to support implementation of CAP, maintains historical records of CAP, and coordinates regional communications. The CRITFC ITMD Project provides coordination and support to the CRITFC member tribes by facilitating their participation in CAP. StreamNet also supports implementation of CAP tasks by funding

state agency (i.e., Idaho Department of Fish and Game (IDFG), Montana Fish, Wildlife, and Parks (MFWP), Oregon Department of Fish and Wildlife (ODFW), and Washington Department of Fish and Wildlife (WDFW)) data stewards and the Confederated Tribes of the Colville Reservation (Colville Tribes). The CAP also supports the CAX data system and its quality control and validation processes by funding, when possible, infrastructure and sharing capacity tasks with Columbia River Basin partners.

CAP leverages existing groups under PNAMP, StreamNet, CRITFC, and CAP-specific groups to support its governance structure.
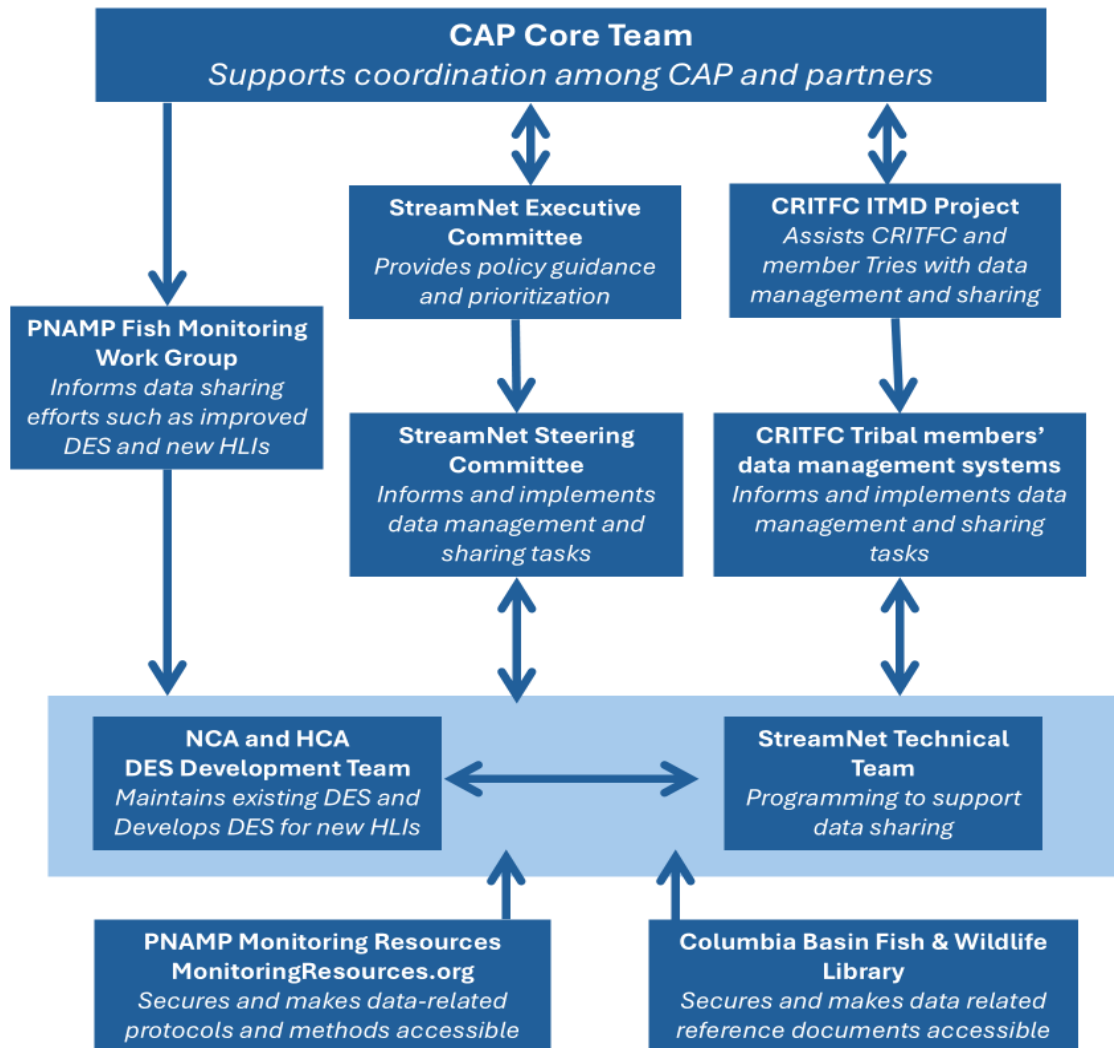
FIGURE 1: *RELATIONSHIP AMONG THE GROUPS SUPPORTING AND INFORMING IMPLEMENTATION OF THE COORDINATED ASSESSMENTS PARTNERSHIP. THE FOUR DOUBLE-HEADED ARROWS INDICATED A BACK-AND-FORTH EXCHANGE BETWEEN THE CAP AND THE STREAMNET EXECUTIVE COMMITTEE, AND CRITFC ITMD PROJECT. THE SINGLE-HEADED ARROWS INDICATE GUIDANCE PROVIDED TO ANOTHER GROUP RELATED TO CAP IMPLEMENTATION.*

Currently there are nine groups and related projects that contribute to the success of CAP:

CAP Core Team - The CAP Core Team meets regularly to coordinate implementation of CAP among partners, including those receiving funding from BPA and other federal grants. The Core Team is comprised of individuals that are responsible for ensuring that CAP produces usable results and includes representatives from BPA, PNAMP, StreamNet Manager, StreamNet Steering Committee, and the CRITFC ITMD Project. Depending on the tasks being addressed, additional representatives may be invited (e.g., U.S. Fish and Wildlife Service (USFWS), Washington State Governor's Salmon Recovery Office, or individual tribes). The CAP Core Team supports discussion among projects implementing the CAP Strategic Plan, directs requests for work to the appropriate CAP team or committee level, monitors implementation, reports to the StreamNet Executive and Steering committee, and serves to maintain forward momentum. The CAP Core Team also informs and directs periodic CAP workshops. The CAP's history and related documents are maintained on the PNAMP website at https://www.pnamp.org/project/cap. All detailed technical documents for the CAX are available at https://www.streamnet.org/cap/.

DDT – The DDT determines DES fields and definitions and import/export guidelines. There are two DDTs, one focused on the StreamNet DES and the other focused on the CA DESs. These DDTs consist of data management professionals and biologists who are responsible for calculating indicators and metrics. The CA DDT membership is dynamic and depends on the species, indicators, and geography of the data. The CA DDT is organized and facilitated by the PSMFC StreamNet staff serving as Coordinator. A partner can be selected to serve as chair to assist during years when there is an active workload. The PSMFC StreamNet Coordinator oversees meeting planning, materials, and status of action items. The most current DESs are available on the StreamNet website at: https://www.streamnet.org/resources/exchange-tools/des/. The CA DDT meets twice a year in a joint session with the StreamNet Technical Team and StreamNet DDT to determine if there is a need to modify existing DES tables and to develop new DES tables.

StreamNet Executive Committee –This group provides annual high-level guidance and decision-making for CAP including the review of CAP HLIs, products, and the CAP Strategic Plan while making decisions on priorities for species, populations, and indicators addressed in the CAP. The StreamNet Executive Committee consists mainly of Columbia River Basin policy staff and tribal, federal, state, and other organizations' project leaders managing and using fisheries data, including entities funded through StreamNet BPA, Northwest Power and Conservation Council (NPCC), NOAA, and USFWS. Current members are listed on the StreamNet website. An invitation to interested tribes to join this committee has been extended, and they participate when feasible. The chair is the PSMFC Executive Director, represented by the StreamNet Program Manager. All agendas, documents, and meeting notes are available on the StreamNet website at https://www.streamnet.org/committees/sn-executive-committee/.

StreamNet Steering Committee – The StreamNet Steering Committee helps implement the decisions of the StreamNet Executive Committee, with emphasis on the Columbia River Basin tasks included in the CAP Strategic Plan and the contracted scope of work. This group includes data manager-level representatives of tribal, federal, state, and other organizations managing and using fisheries data including entities funded through StreamNet, BPA, NPCC, NOAA and the USFWS. The chair is the StreamNet Program Manager. The StreamNet Steering Committee meets twice a year and, when needed, by conference call. Agendas, documents, and meeting notes are available at https://www.streamnet.org/committees/sn-steering-committee.

StreamNet Technical Team – This group manages the programming and data flow from partner systems to the CAX and other StreamNet platforms. This group is composed primarily of PSMFC and state and tribal agency staff from entities funded through StreamNet who implement data management actions. The StreamNet Technical Team is organized and facilitated by the StreamNet staff who are assigned to be coordinators for the team. Partner co-chair positions are available on a rotating, two-year term to assist during years for which there is a more active workload. The team consists of technical experts from PSMFC and state, federal, and tribal agencies and meets regularly to address data integration challenges and to ensure consistent implementation of data standards. More information is available on the StreamNet website at https://www.streamnet.org/committees/sn-tech-team/.

CRITFC ITMD Project – This project is a Columbia Basin Fish Accords (Accords) effort that supports data management for CRITFC member tribes (i.e., Nez Perce Tribe (NPT), Confederated Tribes and Bands of the Yakama Nation (YN), Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The purpose of this project is to support decision frameworks to implement the Accords, assist recovery planning under the ESA and Biological Opinion, and support tribal co-management needs regarding U.S. *v.* Oregon and the Pacific Salmon Treaty. The long-term strategy is to address member treaty and CRITFC data management and sharing issues based on three goals: 1) Inter-tribal Coordination: Identify and promote opportunities for inter-tribal collaboration to implement tribal data management strategies, policies, standards, practices, software and technology, and assist tribal partners to build capacity to share data (or derived metrics) with regional partners, 2) Data Management: Support data management for tribal projects, which includes: a) partial funding for tribal data stewards, b) partial funding for developing and supporting central data management systems for member tribes and CRITFC, and c) partial funding for professional development of data management tribal and CRITFC staff, and 3) Regional Coordination: Support tribal participation in regional data management coordination processes (e.g., CAP and the EPA EN) which have regional data sharing nodes.

Columbia Basin Fish & Wildlife Library – The library was established in 1995 to provide access to current and historic Columbia River Basin information to inform scientific, policy,

and cultural research. Funded through the Columbia Basin Fish and Wildlife Program and administered by the CRITFC, the Columbia Basin Fish & Wildlife Library's collection includes print and digital materials with an emphasis on unpublished gray literature (e.g., reports and government documents). It provides a stable source for documents and resources supporting data in the CAX.

PNAMP – The PNAMP consists of federal, tribal, and state entities (https://pnamp.org/about/leadership/) that collaborate for the purposes of aquatic monitoring, including discussion of data collection, sharing, and documentation. One of PNAMP's key projects is MonitoringResources.org, a tool to document monitoring metadata. The PNAMP contributes to the CAP by facilitating monthly CAP Core Team meetings, the PNAMP Fish Monitoring Work Group (https://pnamp.org/projects/fish-monitoring-work-group/) and CAP Workshops. PNAMP maintains CAP's historical records (https://www.pnamp.org/project/cap) and Outreach Forum distribution lists while coordinating regional communication with the CAP Outreach Forum.

PNAMP Fish Monitoring Work Group (FMWG) – The FMWG supports collaboration, communication, and coordination among fish monitoring practitioners in the Pacific Northwest for effective monitoring assessment methods and efficient data sharing. The tasks addressed by the FMWG are identified by PNAMP partners as well as through CAP and StreamNet. The FMWG contributes to the CAP and StreamNet by providing a venue for the discussion of topics related to CAP/StreamNet task implementation. Workgroup membership is fluid to allow the appropriate subject matter experts to address specific tasks.

4. Strengths, Weaknesses, Opportunities, and Threats Analysis

The SWOT analysis conducted by CAP is a subjective assessment to identify factors that influence near- and long-term success of the program. Strengths and weaknesses reflect internal aspects of CAP that are within its control and can be adjusted to better support its mission, vision, goals, and objectives. Opportunities and threats represent external factors beyond CAP's direct control but are important to consider for sustaining and advancing the program's success. This analysis serves as a strategic tool to guide decision-making and prioritize actions that enhance CAP's effectiveness and resilience.

Strength of CAP
- Over 15 years of collaboration supporting the exchange of data associated with regional standardized indicators.
- Consistent engagement by federal and state fisheries management agencies, the Colville Tribes, and CRITFC tribal consortium.
- Experienced personnel with institutional knowledge to ensure efficient program operations, continuity through staff transitions, and strategic application of lessons learned.

- Improved communication and recognition of CAP's role in providing public access to publicly funded data and supporting informed decision-making by regional partners such as BPA, NOAA, and NPCC.
- Recognition by regional entities (e.g., BPA, NPCC, NOAA, Columbia Basin Collaborative) of CAP's value in facilitating access to reliable data for evaluating mitigation and recovery efforts

Weakness of CAP
- Absence of StreamNet-funded data stewards or technical experts representing CRITFC, NPT, YN, CTUIR, CTWSRO, and SBT
- Limited participation from tribes not directly funded by StreamNet
- Lack of direct engagement from Northwest Indian Fish Commission and its member tribes
- Reliance on a single primary funder with limited annual resources
- Limited diversity in funding sources supporting data flow infrastructure and streamline data exchange between providers and CAP

Opportunities
- Salmon data mobilization efforts
- Facilitation of better co-management among tribal, state, federal and private entities

Threats from External Sources
- Lack of consistent, multi-source funding commitments to sustain and expand CAP operations
- Limited resources (e.g., funding, expertise, personnel) within partner agencies and tribes to adequately engage in CAP

Appendix A: Acronyms

Accords	Columbia Basin Fish Accords
BPA	Bonneville Power Administration
CA	Coordinated Assessments
CAP	Coordinated Assessments Partnership
CARE	Collective benefit, Authority to Control, Responsibility, Ethics
CAX	Coordinated Assessments Exchange
Colville Tribes	Confederated Tribes of the Colville Reservation
CRITFC	Columbia River Inter-Tribal Fish Commission
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
CTWSRO	Confederated Tribes of the Warms Springs Reservation of Oregon
DDT	Data Exchange Standard Development Team
DES	Data Exchange Standards
DOI	Digital Object Identifier
EN	Exchange Network, EPA sponsored
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAIR	Findable, Accessible, Interoperable, Reuseable
FMWG	Fish Monitoring Work Group
FPC	Fish Passage Center
GSRO	Washington State Governor's Salmon and Recovery Office
HCA	Hatchery Coordinated Assessments
HCAX	Hatchery Coordinated Assessments Exchange
HLI	High-Level Indicator
IDFG	Idaho Department of Fish and Game
ITMD	Inter-Tribal Monitoring Data project
MFWP	Montana Fish, Wildlife, and Parks
NCA	Natural Coordinated Assessments
NOAA	National Oceanic and Atmospheric Administration
NOSA	Natural-Origin Spawner Abundance
NPCC	Northwest Power and Conservation Council
NPT	Nez Perce Tribe
NWIFC	Northwest Indian Fish Commission
ODFW	Oregon Department of Fish and Wildlife
PNAMP	Pacific Northwest Aquatic Monitoring Partnership
PNI	Proportionate Natural Influence
PSMFC	Pacific States Marine Fisheries Commission
PSP	Puget Sound Partnership
PTAGIS	PIT Tag Information System
QA/QC	Quality Assurance/Quality Control
R/S	Recruits per Spawner
RCO	Washington State Recreation and Conservation Office

RMIS	Regional Mark Information System
SAR	Smolt-to-Adult Return Rate
SBT	Shoshone-Bannock Tribes
SPI	NPCC Strategy Performance Indicators
StreamNet	StreamNet Program
SWOT	Strengths, Weaknesses, Opportunities, and Threats
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife
YN	Confederated Tribes and Bands of the Yakama Nation

Appendix B: Proposed Data Categories for New or Revised DES

Potential data categories that may benefit from being exchanged using a Data Exchange Strategy (DES) are reviewed and adjusted annually by the StreamNet Executive Committee to reflect regional needs. The CAP Core Team, PNAMP, and StreamNet coordinate to identify when partners and resources may allow scoping the feasibility of exchanging a new data category. To access the necessary expertise to inform these scoping exercises, the CAP Core Team may choose to directly lead or request the PNAMP FMWG to assist as outlined in the [Data Exchange Standard Development and Revision Procedures](#) (version 2021 approved by StreamNet Steering Committee) that is available from the [StreamNet Document webpage.](#) These scoping exercises may result in a recommendation to the StreamNet Executive Committee to support development of a data exchange standard to be maintained by StreamNet to support data exchange using StreamNet data systems by defining how the data should be structured for exchange. Alternatively, these scoping exercises may result in a different approach that does not result in data being exchanged with StreamNet under the structure of a data exchange standard. The outcome of these scoping exercises is to inform the Executive Committee's decisions on development of exchange standards or other guidance for these potential data categories.

Developing and reaching agreement on a new data exchange standard for a new data category does not represent the end of the required work to achieve data flow. StreamNet PSMFC staff and CAP partners, in deciding to adopt a new DES, need to consider an increase in workload to maintain data flow for the existing and the new data categories. The tasks described in this document do not represent the entirety of tasks involved in exchanging data in a timely manner. Entities that engage in data exchange for existing and new data categories have specific tasks that they implement to support this exchange.

The following is a description of data categories identified by the StreamNet Executive Committee as important for regional needs. The determination of which data category is ready for initial scoping is identified by the CAP Core Team and StreamNet Program. Descriptions of the proposed categories:

- **Distribution and density** - of salmon and steelhead, as well as resident salmonids, to assess feasibility of developing controlled vocabulary and confirming specific regional needs including ESA reporting for the five-year status review cycle.

  The PNAMP and StreamNet staff will convene the FMWG to facilitate broader discussions with experts to assess the feasibility and extent of this topic. (For updates on this progress see Fish Monitoring Work Group: https://www.pnamp.org/project/fish-monitoring-work-group)

- **White Sturgeon** - The StreamNet and CAP Core Team, when regional interest and support is confirmed through discussions with the FMWG, PNAMP Steering Committee,

and StreamNet Executive Committee, will conduct a scoping exercise for a White Sturgeon abundance indicator to support regional needs, including NPCC SPI. The approach consists of these steps:

1. Further definition is needed before proceeding to development. Once this is completed, the proponents of this indicator will describe the purpose of this indicator and how it would be used during the StreamNet Executive Committee meeting.
2. If directed to proceed, StreamNet and the CAP Core Team will leverage NPCC work on identifying available datasets from their SPI and will request the assistance of the FMWG to facilitate a broader discussion with experts to assess this topic (progress involving FMWG will be posted on its FMWG webpage). This discussion should inform what content and data would be available to support this indicator and agreement on methods to calculate the indicator.
3. StreamNet/PNAMP/CAP Core Team will convene biologists by contacting relevant entities. This group would identify specific indicators and metrics of regional interest and define a Controlled Vocabulary.
4. StreamNet/PNAMP/CAP Core Team will convene a subset of the DES Development Team and other interested data managers to assess a draft outline of a DES table.
5. StreamNet Program and the CAP Core Team will convene a group of fish and wildlife managers to discuss and report to the StreamNet Executive Committee to seek their approval. If approved, the FMWG and the DES Development Team will develop and finalize the DES table.

- **Bull Trout** - When regional interest and support is confirmed through discussions with FMWG, PNAMP Steering Committee, StreamNet Executive Committee, StreamNet and PNAMP will work with the CAP Core Team to identify funding and confirm a process to initiate development of indicators to support information needs for BPA, NPCC, and the USFWS. The approach consists of the following steps:

    1. Once support is identified for this work, StreamNet/PNAMP/CAP Core Team will leverage NPCC work on identifying available datasets from their SPIs and convene biologists to identify specific indicators and metrics of interest and define a Controlled Vocabulary. This will involve working closely with StreamNet Executive Committee members, or their representatives, to ensure these indicators align with interest and needs. As appropriate, the FMWG may be leveraged to facilitate this work. This discussion should inform what content and data would be available to support this indicator and agreement on methods to calculate the indicator.
    2. Once a controlled vocabulary is defined, StreamNet/PNAMP/CAP Core Team will convene data stewards, with a core group assigned to developing a proposed DES, to produce the DES for the indicators and metrics.

3. The StreamNet/PNAMP/CAP Core Team will convene a group of fish and wildlife managers to test the flow of data using the proposed DES, before finalizing and implementing the new DES.
4. The StreamNet/PNAMP/CAP Core Team will report to the StreamNet Executive Committee on progress and seek input on further refinements to the DES and data queries.

- **Pacific Lamprey** - Will continue to be a potential data category pending the outcome of future discussions and scoping.

- **Fish genetic data** - Will continue to be a potential data category pending the outcome of future discussions and scoping.

- **Investigating Stock Abundance** - A potential data category for other species that would be more inclusive than the current DES for spawner abundance. For resident stocks, stock abundance would include juveniles and adults and this is included in annual reports. Recommend discussing as part of this data category whether stock abundance data for invasive species and piscivores species of concern should be included as part of this data category, such as lake trout.
  - Convene a FMWG task to discuss this data category including whether invasive fish species and piscivores species should be included. Data to be exchanged could consist of trend data sets or estimates for high level indicators; and distribution density.

Scoping exercises listed below have been completed. If additional development occurs, the products will be documented and listed in the outcomes.

- **Carrying Capacity** - StreamNet and the CAP Core Team assigned to the FMWG task of initiating a task team to explore this potential data category. The FMWG Carrying Capacity Standards Task Team (https://pnamp.org/projects/fish-monitoring-work-group/fmwg-carrying-capacity/) identified a need to recommend standard data input and output formats for models. Standard inputs and outputs are needed to support expansion of these models to larger geographic extents and share the results in formats that are consumable for use and comparison of outputs. The Carrying Capacity Standards Task Team has determined that a peer-review publication providing recommendations to support this need is the appropriate approach.

  Developing a DES for carrying capacity has not been recommended at this time.