Data Management is one topic specified in our charter that we have heard a few things about as part of individual presentations, but we haven't discussed comprehensively as a group. This includes the collection of tag/mark related data, management of data using database tools, and the regional accessibility of data. To facilitate future discussion of data management related recommendations, we have drafted two pages of synthesis diagrams to organize data collection and management information in a manner that is consistent with our Charter's requirement to assess life-cycle tracking. The diagrams are populated with example content for:

- a) data collection and management information across the life-cycle; and
- b) flow of data from field efforts to regionally accessible databases. Note that this diagram does not have a flow of data associated with Adipose Clips at this point. Based on your input we will put one together for the next iteration.

As with other synthesis tools, the ultimate work product needs to reflect the knowledge of the Forum participants. Your input on additions, deletions, and modifications is critical. Both diagrams have example, or partial content that as placeholders for "fill in the blank" from you. It is understood that the data management system associated with F&W program is very complex and integrated. As such, the Forum will be challenged to capture and communicate the information in a somewhat simplified, but representative manner necessary to discriminate between tagging technologies. These tools are designed to facilitate this process.

Below are definitions of the terms we used in the diagrams – we can adjust these also based on your input:

- 1) <u>Tag/mark assignment</u>: responsible party for distributing code, frequency, pattern, or otherwise unique identification for tag/mark assignment (Who)
- 2) <u>Tag/mark coordinator(s):</u> responsible party for coordinating and facilitating the implementation of tagging techniques and handling protocol to ensure consistent high quality marking (Who)
- 3) Mark application: mechanism for applying technology mark (automated, manual)
- Data entry: mechanism for uploading data into respective mark/tag database (automatic, manual)
- 5) <u>Collection Locations:</u> where within the CRB is the technology able to give us information (mainstem or tributary)
- Data collection: mechanism for collecting life cycle stage data for the given tagging technology (automated, manual, visual)
- 7) <u>Sample collection</u>: mechanism for collecting life cycle stage data for the given marking technology (automated, manual)
- 8) <u>Lab processing</u>: responsible party for processing collected sample and yielding data for life cycle stage (Who)

Your time dedicated to completing these synthesis tools is much appreciated especially as we approach the busy holiday season. Please collaborate within or across your organizations as necessary to provide accurate and timely input. It would be great to get your input and/or questions and recommendations related to the attached diagram by **November 27**. Please call or email if you want to discuss your thoughts directly. kkytola@sapereconsulting.com or 509.524.2343.

Data Collection and Management Associated with Fish Tagging/Marking Technologies

DRAFT: Example content pending input from Fish Tagging Forum subject matter experts

					\			
Tag/Mark & Release		Juvenile fish migration	\rangle	Ocean Residency		Adult fish migration		Mortality*
	/	/	/				/	·

Adipose Fin Clip	Mark assignment: Mark coordinator(s): Mark application: Data entry:	(WHO?) (WHO?) automated manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary visual/manual entry manual upload	Data collection: Data entry:	visual/manual entry manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary visual/manual entry manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary visual/manual entry manual upload
Acoustic	Tag assignment: Tag coordinator(s): Tag application: Data entry:	NOAA, USACE, PUD NOAA, USACE, PUD manual manual upload	Collection locations: Data collection: Data entry: Data processing:	mainstem, tributary automated manual upload UW (JSATS), <i>POST</i> database, (PUDs?)	Data collection: Data entry: Data processing: UW (JSATS), POST database, (PUDs?)		N/A		Collection locations: Data collection: Data entry: Data processing:	mainstem, tributary automated manual upload UW (JSATS), <i>POST</i> database, (PUDs?)
Genetic	Mark assignment: Mark coordinator(s): Data entry:	Genetic Analysis of Pacific Salmon (GAPS) collaborators GAPS database exchange manual upload	Collection locations: Sample collection: Data entry: Lab processing:	mainstem, tributary manual manual upload (WHO?)	Sample collection: Data entry: Lab processing:	manual manual upload (WHO?)	Collection locations: Sample collection: Data entry: Lab processing:	mainstem, tributary manual manual upload (WHO?)	Collection locations: Sample collection: Data entry: Lab processing:	mainstem, tributary manual manual upload (WHO?)
CWT	Tag assignment: Tag coordinator(s): Tag application: Data entry:	Regional Committee on Marking and Tagging (Mark Committee) Mark Committee automated, manual manual upload		N/A		N/A		N/A	Collection locations: Sample collection: Lab processing: Data entry:	mainstem, tributary manual CWT processing lab manual upload
Otolith	Mark assignment: Mark coordinator(s): Mark application: Data entry:	(WHO?) The North Pacific Anadromous Fish Commission (NPAFC) automated manual upload	N/A		N/A		N/A		Collection locations: Sample collection: Lab processing: Data entry:	tributary manual (WHO?) manual upload
PIT	Tag assignment: Tag coordinator(s): Tag application: Data entry:	PIT Tag Coordinator (Kennewick field office) PTSC automated & manual automatic or manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary automated & manual automatic or manual upload	Data collection: Data entry:	automated & manual automatic or manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary automated & manual automatic or manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary automated & manual automatic or manual upload
Radio	Tag assignment: Tag coordinator(s): Tag application: Data entry:	(WHO?) small group of experts/ vendors manual manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary automated manual upload		N/A	Collection locations: Data collection: Data entry:	mainstem, tributary automated manual upload	Collection locations: Data collection: Data entry:	mainstem, tributary automated manual upload

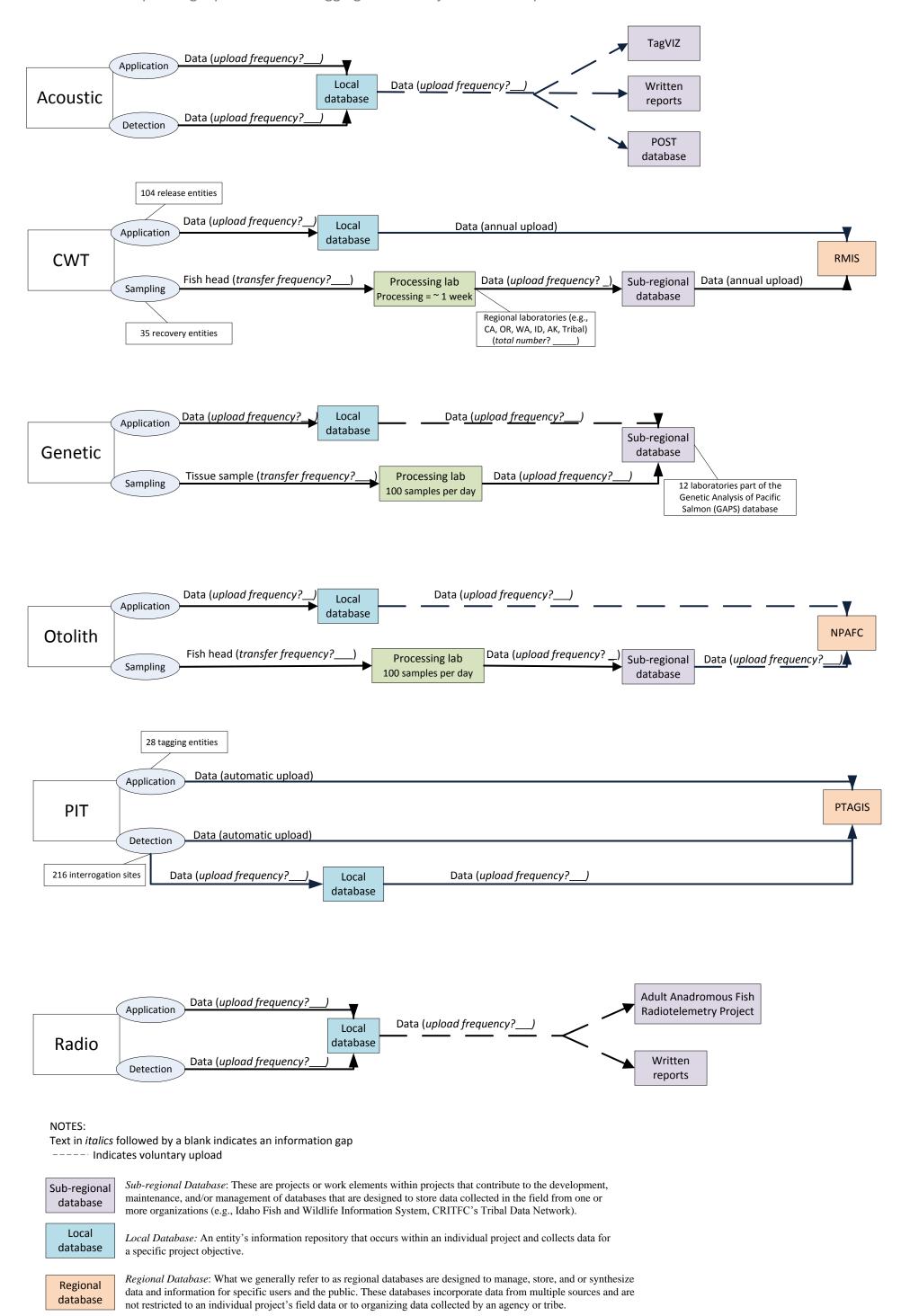
^{*}Fish mortality data may be collected at any stage of the fish life cycle from harvest, recovered carcasses, and predators NOTE: Italicized text indicates data collected outside Fish Tagging Forum materials

Juvenile salmonid

Adult salmonid

Data Flow Chart Associated with Fish Tagging/Marking Technologies

DRAFT: Content pending input from Fish Tagging Forum subject matter experts



Processing Lab: The processing lab is responsible for further analysis of fish sample. Processing of the fish sample in

Processing

lab

the laboratory yields data required to track fish.