Yakama Nation Fisheries

STAR

Information Management System

Data Capture, Management and Sharing

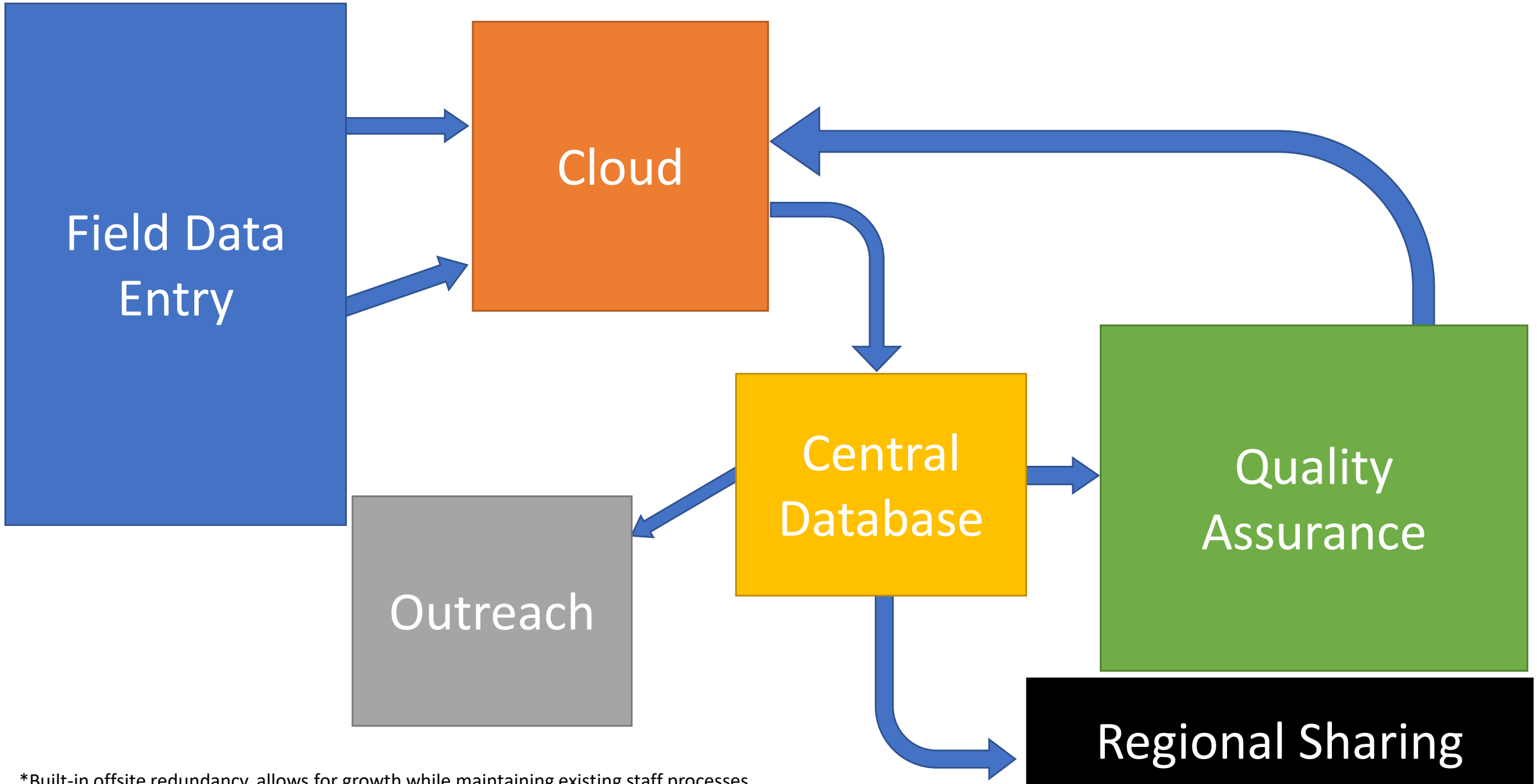
Michelle Steg-Geltner
Status and Trends Reporting Coordinator
4.13.2022

Driving Factors:

1. *Increased demand on staff time to report in certain formats*
2. *Increased demand on projects to share data (Need for Efficiency)*
3. *Need for internal consolidation, review, sharing, documenting progress*
4. *Ability to pass (simplified) processes on to new staff*
5. *Usability of legacy data*

Field Data Workflow

End-to-end solution with ESRI tools (Survey 123/ArcGIS online) and YN's STAR Project



*Built-in offsite redundancy, allows for growth while maintaining existing staff processes.

Field Data Workflow

End-to-end solution with ESRI tools (Survey 123/ArcGIS online) and YN's STAR Project

Yakima screw trap, UC habitat/ snorkel, lamprey surveys.

ESRI Survey123*

Field Tablets / mobile

Field Data Entry

Existing Processes*

Excel, Access, etc.

(Nelson Springs) Dam Counts, Roza Trap Samples, Klickitat Counts, etc. Legacy datasets also.

Cloud: Consolidated, standardized dataset

ArcGIS Online

ESRI Hosted Feature Service

Central Database

Central Dataset Repository

(MS SQL Server)

Quality Assurance

STAR Dashboard

(DRUPAL)

QA Module

Data queries and reporting

Outreach

ESRI Tools

(Dashboards, story maps, online maps, etc.)

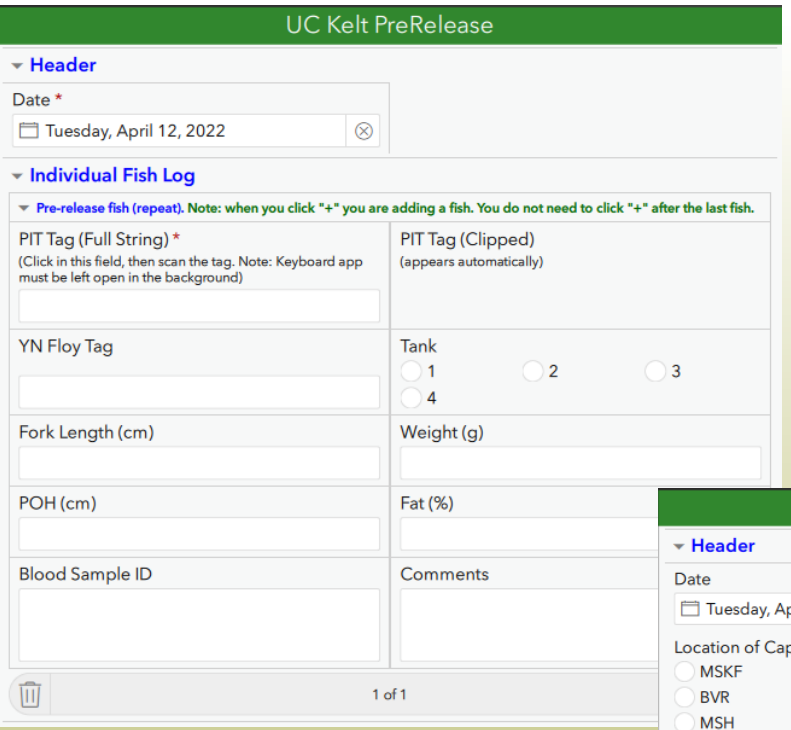
Regional Sharing (Streamnet, DART, etc.)

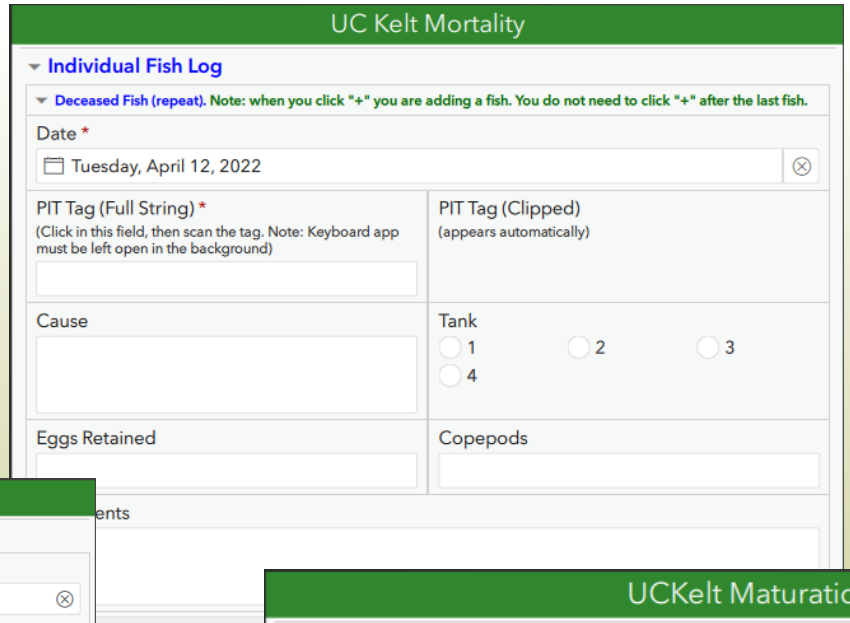
*Built-in offsite redundancy, allows for growth while maintaining existing staff processes.

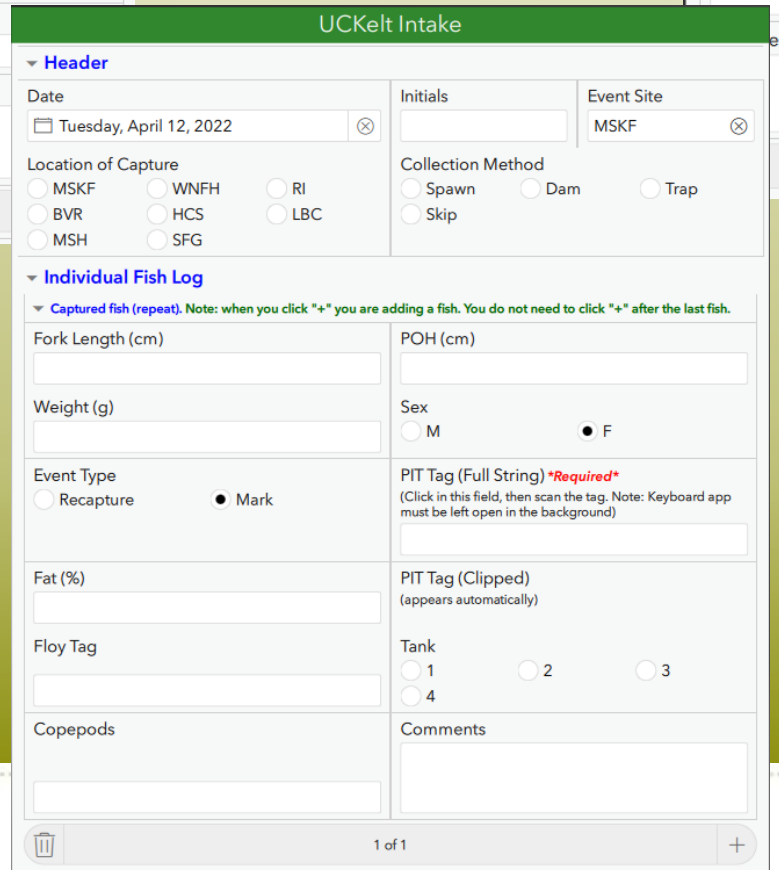
Our Need for Our Approach

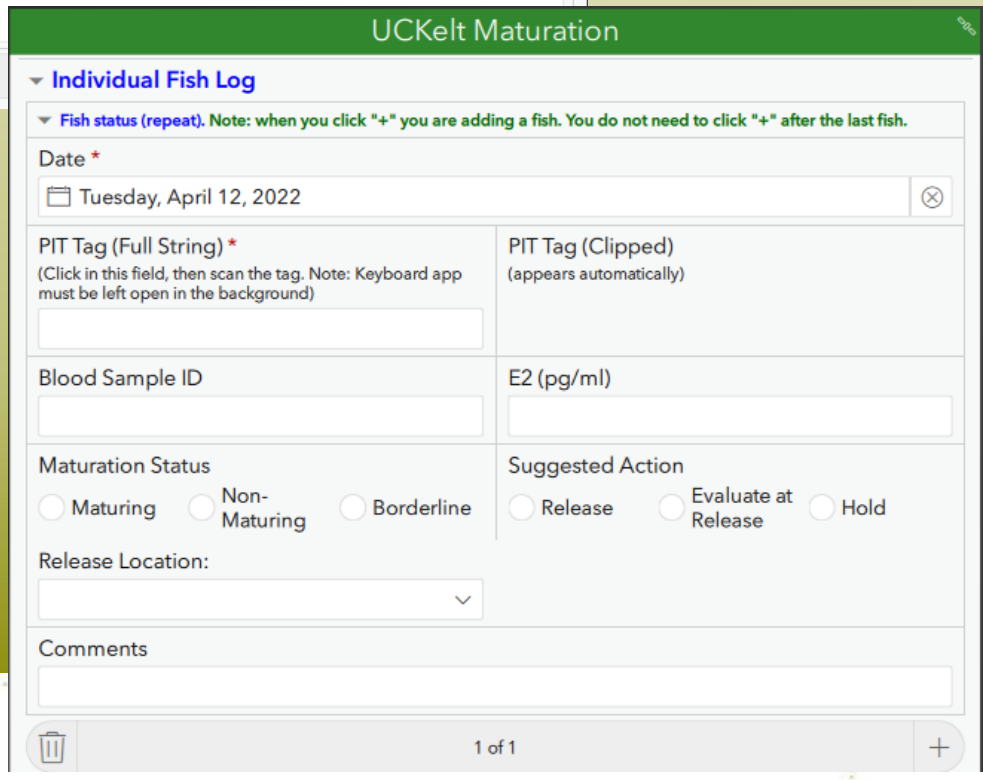
1. *No top-down implementation, siloed legacy*
2. *Need for project by project implementation, demonstration of advantages*
3. *Lacking technical staff*
4. *Prioritization of our priorities (individualized outputs to serve needs)*
5. *Need for self-supportable, in-house tools and systems*
6. *Start in-house, then share regionally*

Advantages: Tailored to Staff Needs E.g. UC Kelt Reconditioning









Yakama Nation Fisheries

HOME ABOUT DASHBOAR

HOME / DASHBOARD / QA / KELT

UC Kelt Consolidated

New Intake | New Mort | New Maturity | New Pre-Release | Export to Excel

PITTAG	Latest Form	Form Date	Tank	Sex	Length (cm)	Weight (g)	Maturity Status	Suggested Action	Mort	Rel/Mort Date
3DA.1A19B20250	INTAKE	05/05/2021	1	F	83	4594			N	
3DA.1A19B203B8	MORTALITY	06/16/2021	2	F	71	3072			Y	06/16/2021
3DA.1A19B20437	PRERELEASE	09/21/2021	1	F	73	4030	maturing	release	N	09/21/2021

	Transaction Type	Event Date	Tank	Sex	Length (cm)	Weight (g)	POH (cm)	Event Type	Event Site	Method	Floy Tag	YN Floy Tag	Location
Edit	INTAKE	05/05/2021	1	F	72	3034	60	Mark	MSKF		14		wnfh
Edit	MATURATION	09/21/2021											
Edit	PRERELEASE	09/21/2021	1		73	4030	59					454	

Yakama Nation Fisheries

Honor. Protect. Restore.

Kelt Roster Report

Export to Excel

Date from: Date to: Tank: **All**, 1,2,3,4

Tank	PIT Tag	Floy Tag	Intake Date	Date of Last activity	Fork Length (cm)	Weight (g)	Sex	Fat %
1	3DA.1A19B2038B	64	4/21/2021		71	3072	F	0.9
1	3DA.1A19B20250	1	4/21/2021		83	4594	F	0.7
1	3DA.1A19B20B8C	119	4/14/2021		72	3124	F	0.8
1	3DA.1A19B20058	73	4/7/2021		67	2264	F	1
Tank 1 Total #:	*4*	*Most Recent Intake Date:*	*4/21/2021*		*Total Weight:*	*13054*		
2								
2								
2								
2								
Tank 2 Total #:	*0*	*Most Recent Intake Date:*			*Total Weight:*			
3	3DA.1A19B205E8	7	04/28/2021		60	2780	F	
3	3DA.1A19B20B39	82	5/5/2021		68	2298	F	0
Tank 3 Total #:	*2*	*Most Recent Intake Date:*	*5/5/2021*		*Total Weight:*	*5078*		
4								
4								
4								
4								
Tank 4 Total #:	*0*	*Most Recent Intake Date:*			*Total Weight:*			
Combined total:	6	Most Recent Intake Date:	5/5/2021		*Total Weight:*	18132		

Areas Not Covered:

Not a comprehensive data warehouse.

Not implemented across all projects.

Targeted just for those who need help with a specific process.

From previous presentation...

	CDMS	STAR
Staff Required	2-3 (data coordinator / facilitator, system administrator, programmer)	2-3 (data coordinator / facilitator, system administrator, programmer)
System Requirements	4 servers (web, database, ArcGIS, authentication)	2 servers (web, database)
Technology	AngularJS, Rest Services ASP.net Web API (.Net 4.0), MS SQL Server, ArcGIS Enterprise	Drupal, PHP, MS SQL Server, MySQL, REST Services ASP.net Web API (.Net 4.0) ArcGIS online
Open Source? (developed by)	Yes (Umatilla Tribe – Ken Burcham)	Yes (Drupal a content management system (CMS) used by many – QW configures custom modules based on YN needs)
Ability to store datasets? (how?)	Yes (manual setup)	Yes (manual setup)
Ability to QA datasets	Yes	Yes
Ability to share data regionally (e.g. CAX)	(individuals are working developing the ability)	Yes
Field data capture	Excel? MS Access? (Manual)	Survey 123, MS Access, Excel
Field data automated to central system?	(individuals are working on ability to load, though not automated)	Yes. (and can edit/add a record in the field, validation)
Reports	Report server	Report server
Data query available to public/staff	yes	yes
Years in development	7+	4+

From previous presentation...

Pros	Cons?
Hybrid, or CDMS	
Would be on same system as CTUIR, Nez Perce, CRITFC *may* be able to provide some support.	Is there a reason why we should be on the same system as them? We can't count on CRITFC support.
CDMS may be a better catalogue, has more metadata. Has track changes inherent in the system.	Still requires coding to get datasets into the system, as well as to develop queries e.g. for tracked changes, and to share.
	Would need more resources, technical staff to host and maintain. Combining systems would be complicated
	Transferring over to/developing this system would take time away from making other progress (set us back a year or two). Loss of momentum.
	Intranet based (maybe con?)
STAR system	
Friendly user interface, tools specifically for unique dataset/ user needs	Similar to CDMS, does also need coder/developer to add/modify to this (sql, java?).
Is compatible with yakamafish website, should be easier to manage, maintain for our staff	Although backend does still need slq programming
Has tools in place to flow data into and out of it.	Continuing development needed (of course)

End-to-End Data Capture, Consolidation, and Sharing

Data Capture

Survey123 ArcGIS Online

- Screw traps
- UC habitat, fish surveys
- Lamprey & habitat surveys
- Dam counts
- Trap Samples
- Hatchery tagging & sampling
- Harvest monitoring?

Existing Processes (Excel, Access, etc.)

Field Data

ESRI

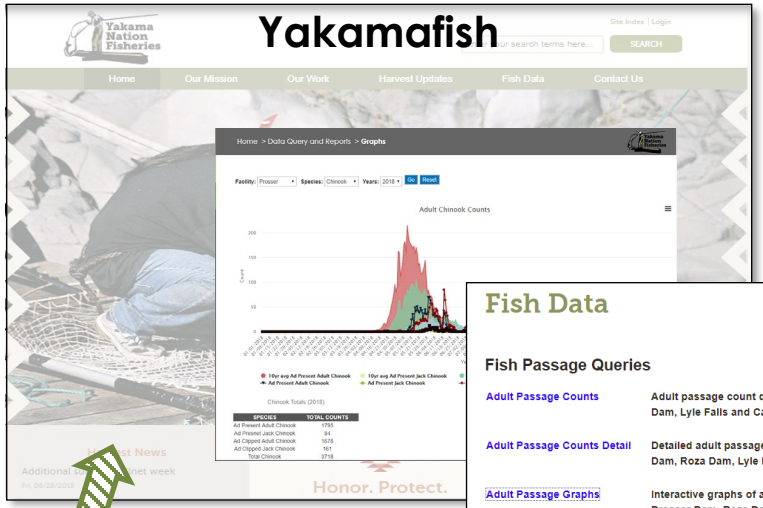
automated scripts

Real-Time

Central Dataset Repository (Access through STAR Dashboard)

Quality Assurance; Controlled Dataset Access

Fish data is displayed for public view, sharing



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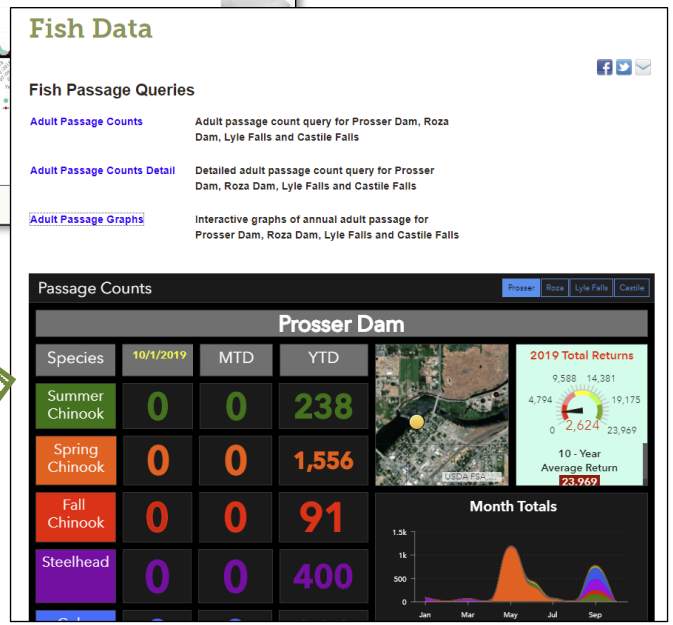


PUSH data to external partners, or they retrieve from us. (Streamnet, CAX, DART)

Key

Partly or fully automated

Green Completed

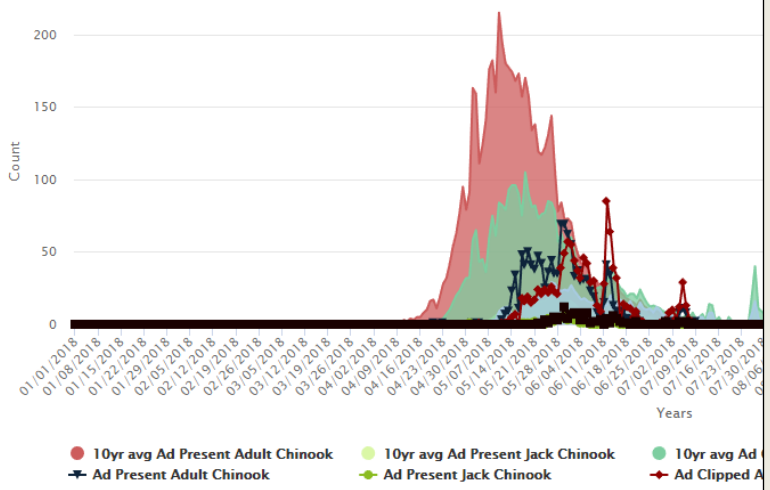
Blue Some in-progress

Data Display, Query, and Sharing Tools: Public Access

Home > Data Query and Reports > **Graphs**

Facility: Prosser | Species: Chinook | Years: 2018 | Go | Reset

Adult Chinook Counts



Chinook Totals (2018)

SPECIES	TOTAL COUNTS
Ad Present Adult Chinook	1795
Ad Presnet Jack Chinook	84
Ad Clipped Adult Chinook	1678
Ad Clipped Jack Chinook	161
Total Chinook	3718

Fish Data

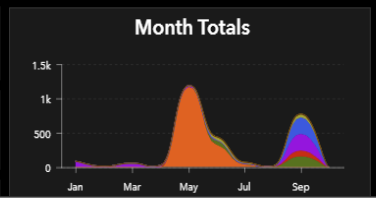
Fish Passage Queries

Adult Passage Counts	Adult passage count query for Prosser Dam, Roza Dam, Lyle Falls and Castile Falls
Adult Passage Counts Detail	Detailed adult passage count query for Prosser Dam, Roza Dam, Lyle Falls and Castile Falls
Adult Passage Graphs	Interactive graphs of annual adult passage for Prosser Dam, Roza Dam, Lyle Falls and Castile Falls

Passage Counts — Prosser | Roza | Lyle Falls | Castile

Prosser Dam

Species	10/1/2019	MTD	YTD
Summer Chinook	0	0	238
Spring Chinook	0	0	1,556
Fall Chinook	0	0	91
Steelhead	0	0	400



Home > Data Query and Reports > **Adult Passage Count Details**

Yakama Nation Fisheries

HOME ABOUT DASHBOARD

HOME / DASHBOARD / FISH COUNTS / ADULT PASSAGE COUNTS DETAILS

Adult Passage Count Details

e: 09/30/2019 Date Sort By Ascending

ickitat River RM 2.4). With the exception of some fish that are collected for hatchery broodstock er after sampling. The counts do not include fish that ascended the natural waterfalls or fish that ing fish counting that occurs as fish are returned directly to the fishway without handling or

				TOTAL SUMMER						TOTAL FALL
SUM	WJSUM	HASUM	HJSUM	CHINOOK	WAFCK	WJFCK	HAFCK	HJFCK	UAFCK	CHINOOK
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	56	56	197	46	-	355
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	18	6	21	1	-	46
-	-	-	-	-	8	3	22	7	-	40
-	-	-	-	-	28	17	62	14	-	121
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	3	3	2	-	8
-	-	-	-	-	2	1	4	10	38	55
-	-	-	-	-	-	7	4	1	-	12
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	112	93	313	81	38	637

hafck - marked adult fall chinook, hafkco - marked adult fall chinook or, hasck - marked adult spring chinook, hasum - marked adult summer chinook, hjfck - marked jack fall chinook, hjfkco - marked jack fall chinook or , hjsck - marked jack spring chinook, hjsum - marked jack summer chinook, uafck - unknown adult fall chinook, uafkco - unknown adult fall chinook or , uasck - unknown adult spring chinook, ujfkco - unknown jack fall chinook or c, ujsck - unknown jack spring chinook, wafck - unmarked adult fall chinook, wafkco - unmarked adult fall chinook or coh, wasck - unmarked adult spring chinook, wasum - unmarked adult summer, wjfck - unmarked jack fall chinook, wjfkco - unmarked jack fall chinook or coho, wjsck - unmarked jack spring chinook, wjsum - unmarked jack summer Chinook