

Smolt Monitoring 2009

Condition Sampling Standardization

Standardization

- Brief history of what has been done
- Where we are now
- What is left to be done
- Timeline of tasks to be completed

A brief review of steps to date

- FPAC requested in the fall of 2007 that condition data be reported real-time
- February meeting with SMP sites to determine data they were collecting (diverse suite of condition sampling data)
- FPC attempted to report condition data as gathered by sites (had issues with reporting results because some sites did not track individual fish (double counting injuries was possible))
- COE memo summarizing their findings about condition monitoring May 8, 2008 also showed no standardization
- FPC check in with FPAC on the condition indices to report (essentially FPC identified same set of categories as in COE memo) memo dated 5/12 discussed and approved at FPAC on 5/13
- First step toward standardization was to have sites report data within condition and disease categories implemented on July 1.

Standardizing Fish Condition Data Between Sites

Site	Original	Standardized
LGR	34	19
LGS*	26	19
LMN*	19	19
MCN	32	19
JDA	21	19
BON	21	19

* LGS and LMN have changed the way they report condition and now report only the 19 Standardized Conditions

Standardized Fish Conditions

Head Injuries

Eye Injury
Pop Eye
Operculum
Head Inj. Other

Body Injuries

Body Injury
Fin Injury

Predation

Fish
Bird
Lamprey
Pred. Other

**Reported as
Physical Injury
In Graphs**

Disease

Fungus
Columnaris
BKD
Parasite
Deformity
Disease Other

**Reported as
Disease In
Graphs**

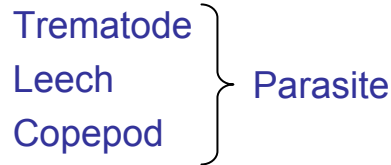
Descaling

Descaled (0-5%)
Descaled (6-19%)
Descaled ($\geq 20\%$)

**Currently NOT
Reported In
Graphs**

Examples:

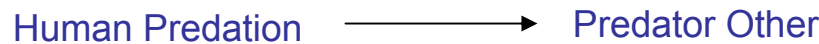
JDA and BON have 3 different parasites:



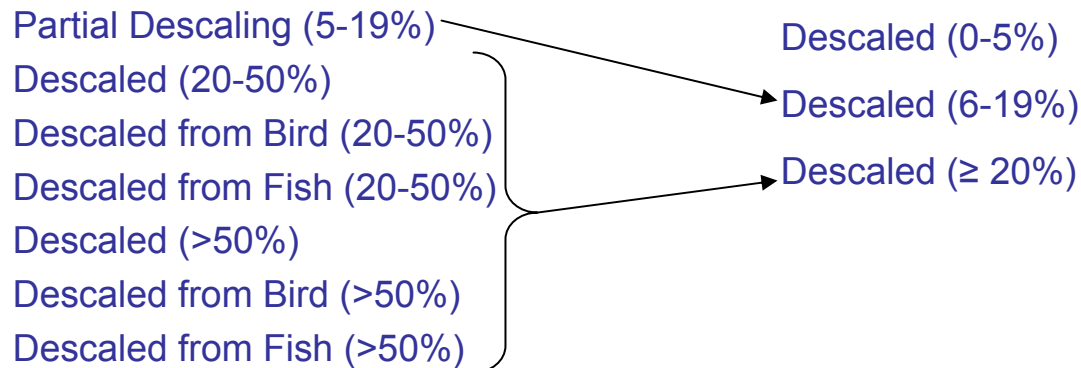
McNary Identifies five additional “diseases” that are not included in the standardized format:



Lower Granite identifies a predator that is not included in the standardized format:



McNary has seven different “types” of descaling that they identify, Standardized Format has 3:



Future steps to standardize condition sampling

- Get input in Defining the uses for the data (this determines what should be collected)--ongoing
- Determine reports to be generated (data summaries) (FPAC and COE)
- Determine data to be collected (finalize) check in with FPAC and COE
- Standardization of indices (carefully define metrics to be gathered so that they are as meaningful as possible) in context of questions being answered – final product **protocol document**
- Training SMP personnel to report data in agreed upon categories of injury and disease

Other steps to complete

- Programming
 - Incorporate condition data entry into new data entry program
 - Include outputs for COE, FPAC and FPC database/web
- Determine sample size requirements
 - Including addressing whether to examine all fish for descaling or subset
- Determine sampling frequency necessary to provide reliable condition information

What is the purpose of condition monitoring?

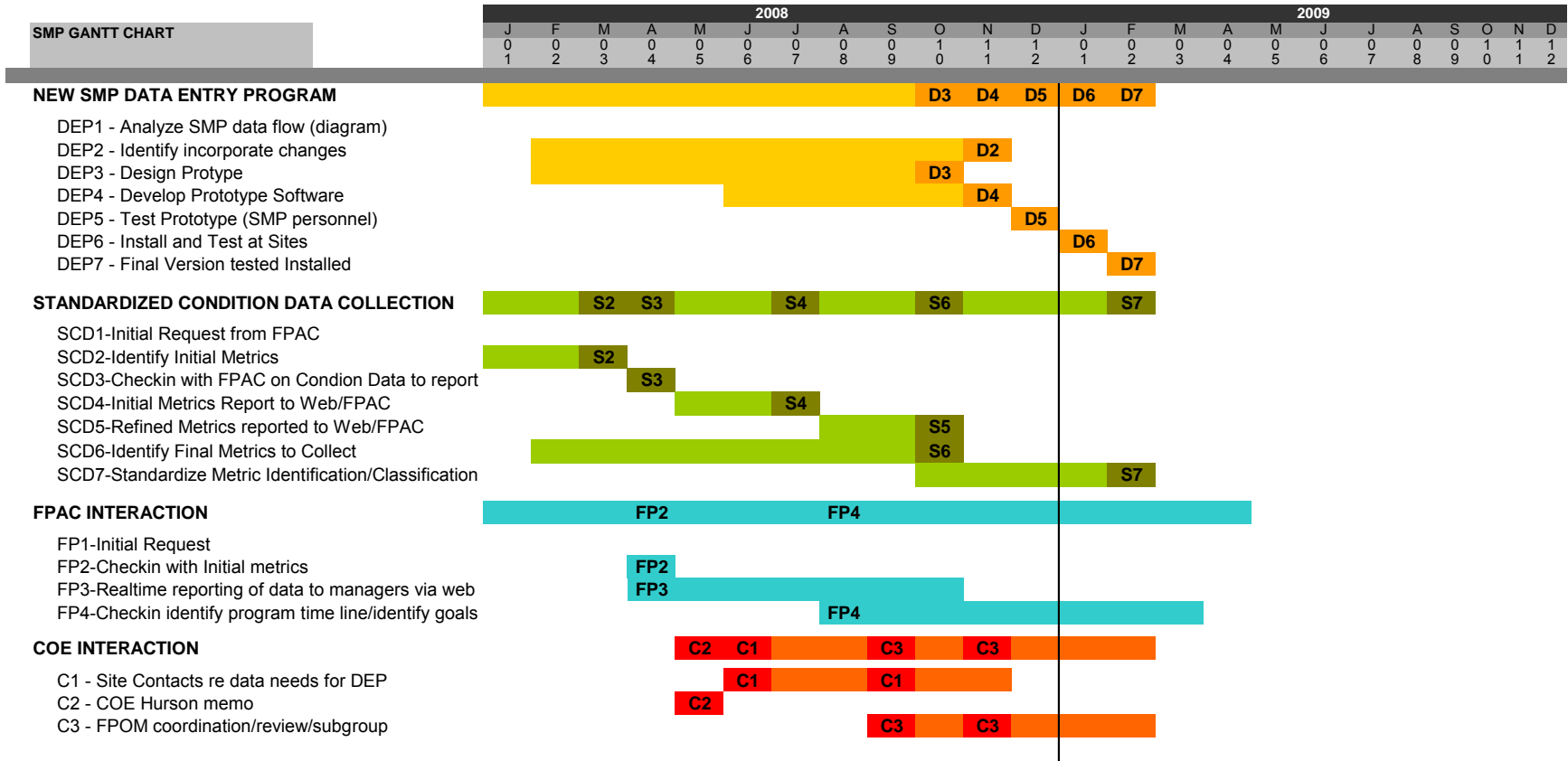
What management decisions will be based upon these data? Examples

- Identify changes in fish condition (rapid increases?) to find bypass problems at dams
- Provide triggers for management actions (e.g. 5% injury = rake trash racks or 80% disease stop collecting fish for transport...)
- Provide historical record for year to year comparisons (descaling events per site/yr)
- Characterize overall population health

Salmon Managers

- Objective of condition sampling is to provide information about the impacts of bypass passage on salmonids

Timeline for completing standardization for 2009 season



SITE WET LAB

PC with FPC32 and Touchscreen

Batch Fish Count

1. Technicians count fish using tallies on tally wacker or standardized handlog
2. Main technician completes standardized handlog with batch data
3. Main technician enters batch data on touch screen or uses office computer

Fish Condition Sub-batch

--Fish condition data is entered using "Fish Condition buttons" on the touchscreen



Outputs

Files/Reports include:

1. Standardized handlog **faxed to FPC**
2. Batch data file in .xls format **emailed to FPC**
3. Fish condition sub-batch data in .xls format; NOTE 1 and 2 could be the same file **emailed to FPC**
4. **At FPC**, Daily SMP Summary Batch Report
5. **At FPC**, Daily Mark Recap Report
6. **At FPC**, Daily Incidental Catch Report
7. **At Site**, Daily COE Report(s) – needs to be determined
8. **At FPC and Site**, Daily Sub-Batch Fish Condition Report



Outputs



.xls data files (1 and 2) output saved to thumb drive – can be used on this computer or office computer

FPC

FPC Office uses FPC32PST application to upload data to FPC Database Server



PC with FPC32

1. If batch data were not entered in the site wet lab, batch data are entered into FPC32 from the standardized handlog.
2. Data are saved and output in an xls format to email to FPC office.
3. XLS data can be used by SITE for their own functions.
4. Daily reports are generated and also saved in XLS format.

SITE OFFICE