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**From:** Perry, Russell <rpatrick.perry@usgs.gov>  
**Sent:** Monday, February 11, 2019 2:18 PM  
**To:** Noble Hendrix  
**Cc:** Adam Pope; Vamsi Sridharan - NOAA Affiliate; Eric Danner - NOAA Federal; Doug Jackson  
**Subject:** Update on historical run of survival estimates

Hi Guys,

I've got some good news and bad news:

Bad news: I wasn't able to make it up to our lab to get the finished runs because we're in the middle of a major snowstorm (see pics). We've got ~18 inches and expecting another foot!

Good news: Adam has nearly finished the code to run it on Yeti, and I've almost finished modifying the code to run survival probabilities for Delta Fry. The run we launched a week ago was just for through-Delta survival, so we still needed to work on a approach for Delta Fry.

For Delta Fry, here's what were doing:

- 1) "release" N individuals in each of the 8 survival reaches on each each day of historical period for each mcmc iteration.
- 2) simulate their travel time and survival from the start of each reach to Chipps Island.
- 3) summarize daily then monthly survival for each reach to Chipps Island.

That will provide a set of monthly survivals from the start of each reach to Chipps Island that can then be weighted by the expected proportion of fry entering each reach and their expected survival from fry to smolt. Noble, I'm hoping you can work out how to weight the reach survivals that we provide to you. Let us know if we can assist with that.

That's where were at. I'll send some updated timelines as soon as we've some timed test runs.

Russ





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