

Need definition / clarification

	Used	CBR Notes
To salt	Row 4, 13, 56	Currently, the model includes survival to the “Estuary” defined as extending to the Astoria Bridge near the mouth of the Columbia. This factor was never actually used. Estimates in Simpas are made to below Bonneville
Raised Crest	Row 30, 36, 40, 41, 50	Is this the same as RSW? The model has support for input and output related to RSW spill and survival. Yes, it is the same. We need a direct way to set the percentage of spill that is routed through RSW (including dams that do not currently have RSW, but that we may want to simulate)
Capped Spill Hours	Row 47	What is this and how is it used in calculations? This was where we entered and reported the spill cap and spill behavior for Bonneville. This may be superseded by a different dam control approach. It may still be desirable as an output though
Spill Efficiency	Row 33, 38	Linear vs. Non-linear? Current calibrations of the model use linear equation for IHR, MCN, JDA, TDA, and BON I. How would this input act? SIMPAS has used spill efficiency equations with up to 6 th order polynomials. Jim Faulkner has found 2 parameter curves that fit the data at LGR for spill and RSW efficiencies. Since multiple parameters will be needed for each dam to describe the spill efficiencies, this should probably be handled only through the text input files. Typing a number in this entry-screen box should probably supersede any equations defining spill efficiencies. This is not a direct entry box, actually it is for output and indicates the spill efficiency for the particular conditions of the model run
Total Flow	Row 34, 39	What is this value and over what time period? Need to figure out what this input would be in a time-step model that can use daily observed flows for retrospective runs. As an Input, it could supersede the daily varying input flow values. As an output it could report an average flow over the “Run Period” (See below). I realizes that we will be using a time step flow file. Having an average flow for output would be useful
Total Spill Flow	Row 35, 40	Need to figure out what this input/output would be in a daily time-step model as with the Total Flow above. In Simpas, this is where the percent spill for each project is set. We still need to be able to directly manipulate spill percentage. This is actually the most commonly changed factor in model runs. Another consideration is change in

		spill percentage by date. Spill flow settings should have an effective date
Bypass / Sluiceway	Row 27, 28	Model does not differentiate between bypass and sluiceway. Can enter “bypass” survival. For the purposes of the model they are essentially the same.
Pool Predation Adjustment Factor	Row 53	We would suggest that rather than reduce or increase survival by a percentage that this term be applied to predator density. This is germane since the reservoir survival and passage issues are still being evaluated. They will have a functional form related to other variables and parameters being determined by the reservoir sub-group. I would assume that this factor would be superseded by the use of a more complex pool survival function. Since the current Simpas pool survival is a direct percentage, this factor was developed to help account for increased pool mortality related to reduced spill and longer reservoir residence time. Whatever reservoir survival function is chosen, we would want to report the inputs to the function (temperature, turbidity, predator density, etc) in the output sheet
Pool survival	Row 54	Not possible as input. Can report the calculated pool survivals as output. This was the point where we directly entered the pool survival percentage into Simpas. If a more complex pool survival function is adopted, we may want areas where the factors used in the function can be directly manipulated (assuming that they are not derived from other parts of the model that are hooked into a time step, etc.). We would definitely want the total pool survival reported in the output.
GBD mortality	Row 55	Not possible as input. This was where a set percent mortality would have been entered in Simpas. Since, if GBD is incorporated in the model it would be derived from other conditions of the model rather than entered directly, it is no longer needed as an input. However, I think it remains important for the output, even if it is always 0.
Reach Survival (BON to saltwater for transported fish)	Row 56	Not possible as input. Wait for outcome from Post-Bonneville Group. <u>Post-Bonneville Group</u> <u>Product:</u> Methods to assign various forms of latent mortality to in-river migrating and transported fish. <u>Tasks:</u> 1) Determine required outputs from passage model; 2) Determine algorithms for applying latent mortality functions to fish arriving below Bonneville; 3) Determine ranges of mortalities. <u>Timeline:</u> Due to scheduling conflicts of members, this group will not meet until October. As I noted earlier, this factor was put into Simpas, but never actually used. Primarily because there was no data.

Additional Items

	Used by	CBR Notes	Determined by
Run Period	<p>OUTPUTS:</p> <ul style="list-style-type: none"> • Daily average spill • First period average spill • Second period average spill <p>INPUTS:</p> <ul style="list-style-type: none"> • Total Flow • Total Spill Flow • Spill Flow through Raised Crest 	<p>First and last day of the run. This is needed to define the calculation period applied to produce various outputs when running a daily time-step model to produce summary or averaged values for the whole period, e.g., “Daily average spill.” Current model inputs for river condition elements such as “outflow” are 365 days long.</p>	<p>Current idea is that this would be based on stock selection, but be somewhat general for defined “seasons.”</p>