The behavior metrics are calculated as follows:

* Activity – Measured as a percent of “Active” frames in the total frames of the movie. Higher percent activity correlates to better functional recovery. “Active frames” are frames in which the distance moved was more than 5 pixels compared to the previous frame. Two plots are created for this metric, one with the flow velocity calculated into the activity, the other without the velocity.
* Average Y position – Average Y position over the time of the movie during the different flow speeds. This is useful for injury conditions because animals that are not regenerating as well as the control group will stay in the back of the tunnel, away from the flow, because they cannot effectively swim against the flow.
* Direction – Titled “Time Swam Against Flow” measured in percent of “Against” frames in the total frames of the movie. “Against” is considered frames where the Y position increases by 5 pixels. If the Y position decreases by pixels, the frame is considered “With”. If the Y position changes any less than 5 pixels, the frame is labeled “Static”. “Time Swam Against Flow” is also plotted twice with flow velocity calculated and without.
* Distance – Measured as “Distance Swam”. This is the total pixel change over all the frames of the movie.
* Burst – A burst is measured as a series of continuous motion (more than one frame) in the “Against” direction. Burst amplitude represents the sum of the distance traveled in all bursts divided by the total number of bursts. Burst duration measures the average number of frames per burst. Burst frequency is the number of bursts per minute.