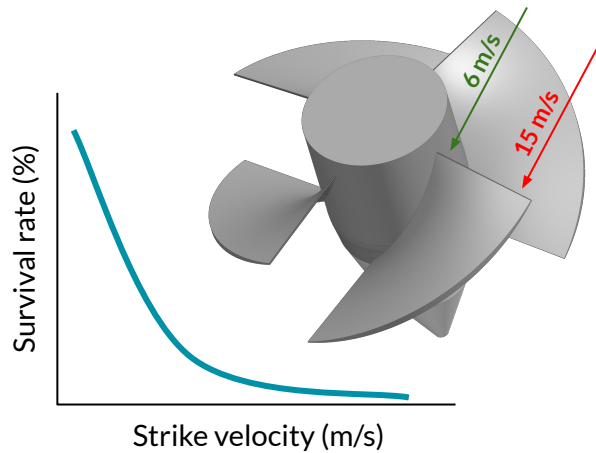


The Center Sender

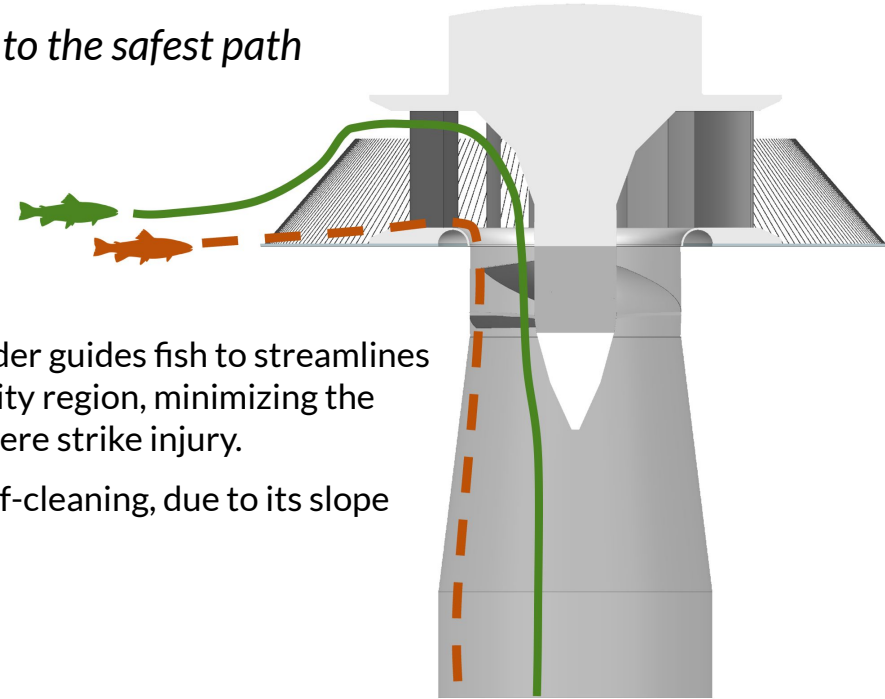
A simple, self-cleaning device to direct entrained fish to the safest path

High blade velocities and potential grinding risk make the blade tip/periphery region the most dangerous part of the turbine for passing fish.



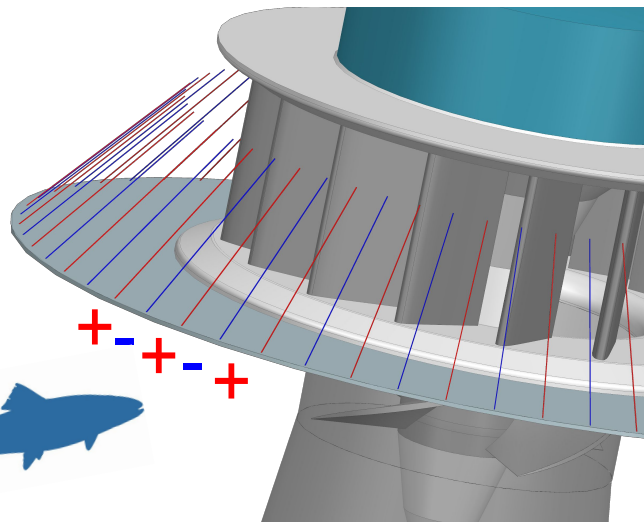
The Center Sender guides fish to streamlines in the low-velocity region, minimizing the likelihood of severe strike injury.

The device is self-cleaning, due to its slope and form factor.



Electrification of the Center Sender in a manner similar to the HyFish Fish Protector technology developed by the Aufleger group at University of Innsbruck improves guidance effectiveness, while allowing for wider bar spacing, so hydraulic losses are minimized.

The wands of an electrified Center Sender could also be arranged in arbitrary arrays, allowing self-cleaning fish guidance at other types of intakes.



The concept allows for use with either radial-inflow or axial-inflow turbines.

