



## **Aquarium Care & Feeding Manual**

### **History**

The aquarium was created in November of 2013 to replace the old exhibit and increase the room's relevance to the hatchery experience. It was designed to show the public a more complete picture of the salmon lifecycle, with eggs and then fry and smolt. This is, we think, the only place in the PNW where you can see the whole cycle displayed in one place!

The mural is designed to represent the habitat and food web both above and below the waterline. It was painted by Larry Kangas, who also did the water tower and many other murals in Issaquah, including those at Darigold, the logging mural kitty-corner from City Hall, and the Issaquah Café's interior.

### **Feeding and Maintenance**

Since the aquarium sees several stages of the chinook and coho life cycle, proper feeding will change over the course of the year, both in terms of size of food and frequency. This is at the direction of ISH management. Please check the calendar and any notifications from the aquarium team, as there is no set schedule for fry development and procedures may change. In addition, there may be two different stages occurring at once, when we have both chinook eggs and last year's coho. Furthermore, conditions in the raceways are different from conditions in the aquarium so the feeding schedule may not match what's happening at the hatchery more broadly. What follows is a general guide to each stage. Please check the latest email communication from the aquarium team for up-to-date instructions.

### **Eggs**

They're eggs, they don't need anything. Don't worry about it. While feeding fry on the other side, do check for dead eggs and alevin and remove them with the baster and net you'll find next to the aquarium. Dispose of these in the drain tube. (If you do notice something odd while feeding the fish in the other side, like a significant die-off, please let someone know.)

### **Alevin**

Salmon fry do not eat until they are "buttoned up." This means that the yolk sac left over from the egg has been fully absorbed and they're ready to take solid food. Feeding before this can result in the fish having difficulty learning to eat and failure to thrive. ISH staff will pass word on to Dave and Norb, and you will be notified when this stage is over and the fry feeding schedule begins.

### **Fry**

Once they are taking solid food, you will want to come in on every day you are scheduled to feed. Both over- and under-feeding salmon can be harmful. Over-feeding leads to excess food in the water which can lead to water quality problems as organic material breaks down and produces ammonia, nitrates, and nitrites. The number of days they need to be fed will change.

When feeding, the rule is to distribute food along the top of the water and allow the fish to eat all they can in one minute. Some will fall to the bottom, which will be consumed by the sculpin, our other local residents. However, salmon fry will often not swim down to retrieve food off the bottom, so if too much food is landing there, you are feeding them too much or too quickly.

### **Every Time**

When raising the mural, pull slowly and evenly on the rope that's hitched to the wall. The mural will crease a little as it raises—this is normal. The more gently we treat it, the longer it will last!

On each visit, please check that the fan, chiller, and pump are all working properly. The chiller should be between 50-54° and water should be flowing through the pump system. Also check that no fish are in distress or caught in the filter areas—if a fish is trapped, use a net to transfer the fish to the main tank and notify the aquarium team. If you think that something is wrong or missing, please use the contact information below.

Finally, please make sure you check off the calendar next to the aquarium before leaving with the correct color checkmark to indicate you have been here and fish have been fed.

**Blue** – alevin and fry

**Black** – coho yearlings/chinook fingerlings

**Red** – Aquarium Concepts maintenance and servicing

### **Typical Aquarium Configuration\***

<b>Time Frame</b>	<b>Partition 1</b>	<b>Partition 2</b>
Sept-Dec	Chinook eggs/alevin	Coho fry
Dec-May	Chinook fry	Coho fry
May-Aug	Chinook and coho fry	

### **Communication & Scheduling**

Primary contact:

Dave Waggoner | 425-221-2503 (cell) | [davids\\_waggoner@msn.com](mailto:davids_waggoner@msn.com)

Secondary contact:

Norb Ziegler | 425-533-5385 (cell) | [ziegler98075@gmail.com](mailto:ziegler98075@gmail.com)

Tertiary contact:

FISH Office | 425-392-1118 | [execdir@issaquahfish.org](mailto:execdir@issaquahfish.org)

Please refer all concerns/issues to the above contacts. If you are unable to make a feeding shift, please notify the whole group by using reply-all.

Aquarium Concepts (design & maintenance) | (206) 542-6114

All Service Glass (window) | (425) 392-1122