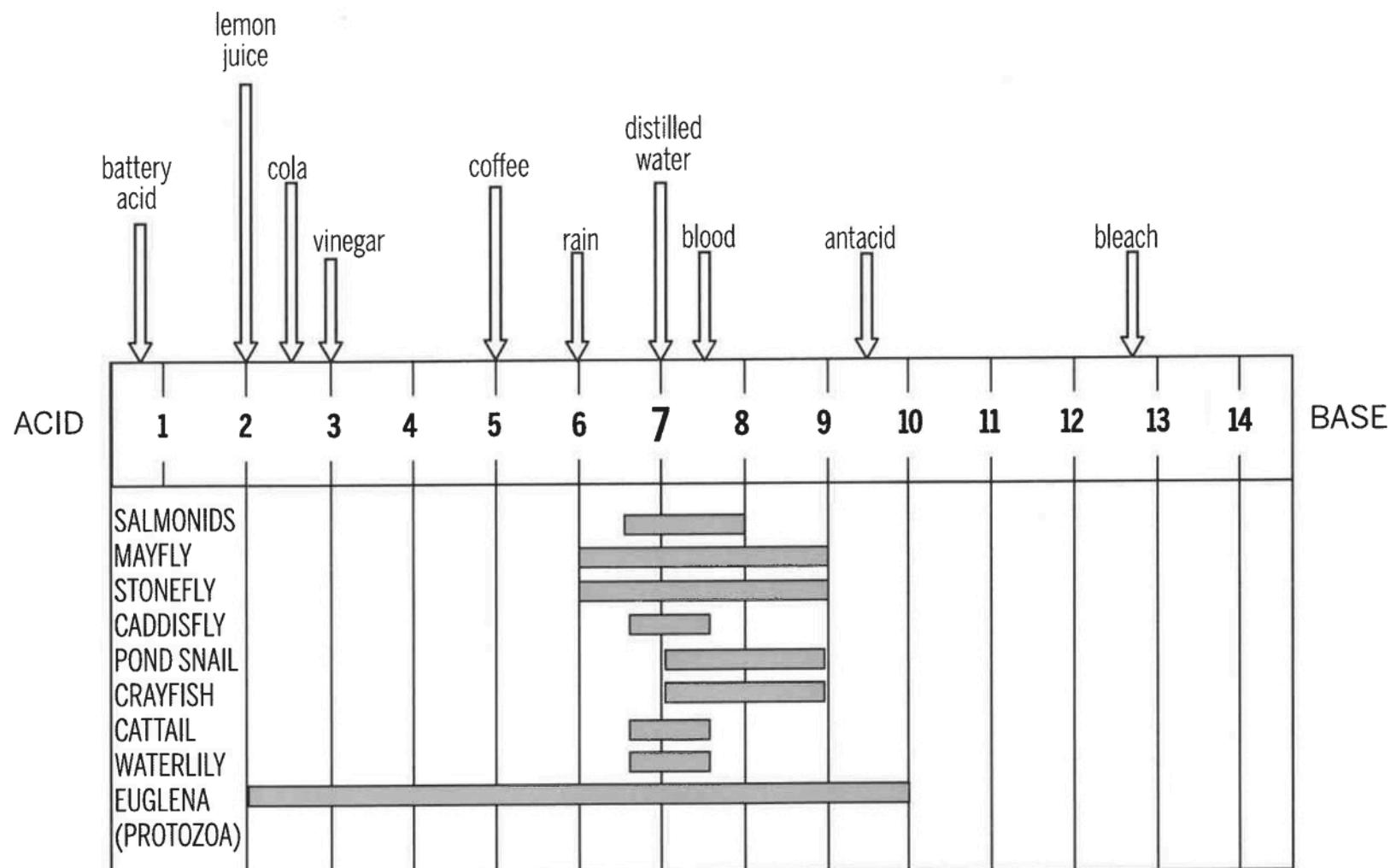




# Water Quality

## Lethal pH Limits for Aquatic Organisms





# Water Quality

## OREGON WATER QUALITY STANDARDS for TEMPERATURE

COLUMBIA RIVER  
SALMONID REARING BASINS  
SALMONID SPAWNING WATER

•C

•F

SPRING CHINOOK

JUVENILE GROWTH  
EGG & ALEVIN INCUBATION

SPAWNING

MIGRATION

LETHAL TO ADULTS

LETHAL TO SMOLTS

DISEASES / BACTERIA THRIVE

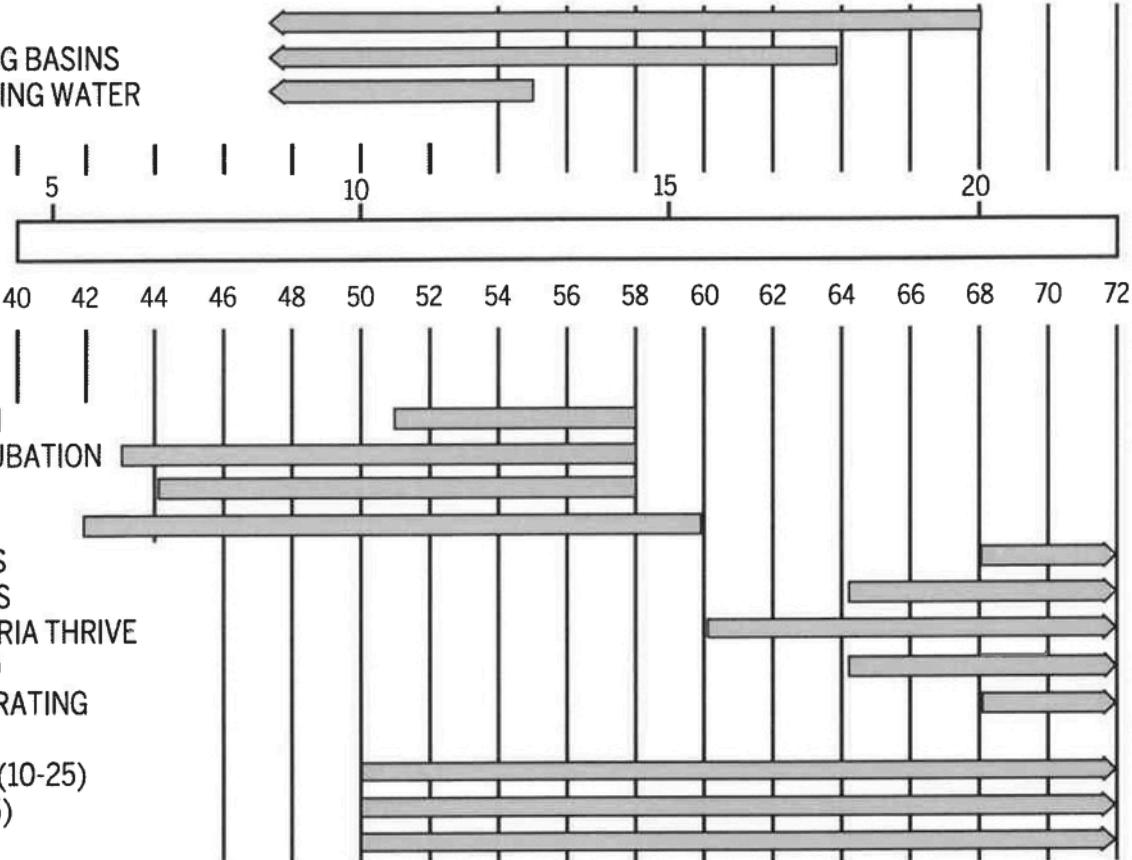
ADULTS STRESSED

ADULTS STOP MIGRATING

AQUATIC INSECTS (10-25)

POND SNAIL (10-25)

CRAYFISH (10-25)



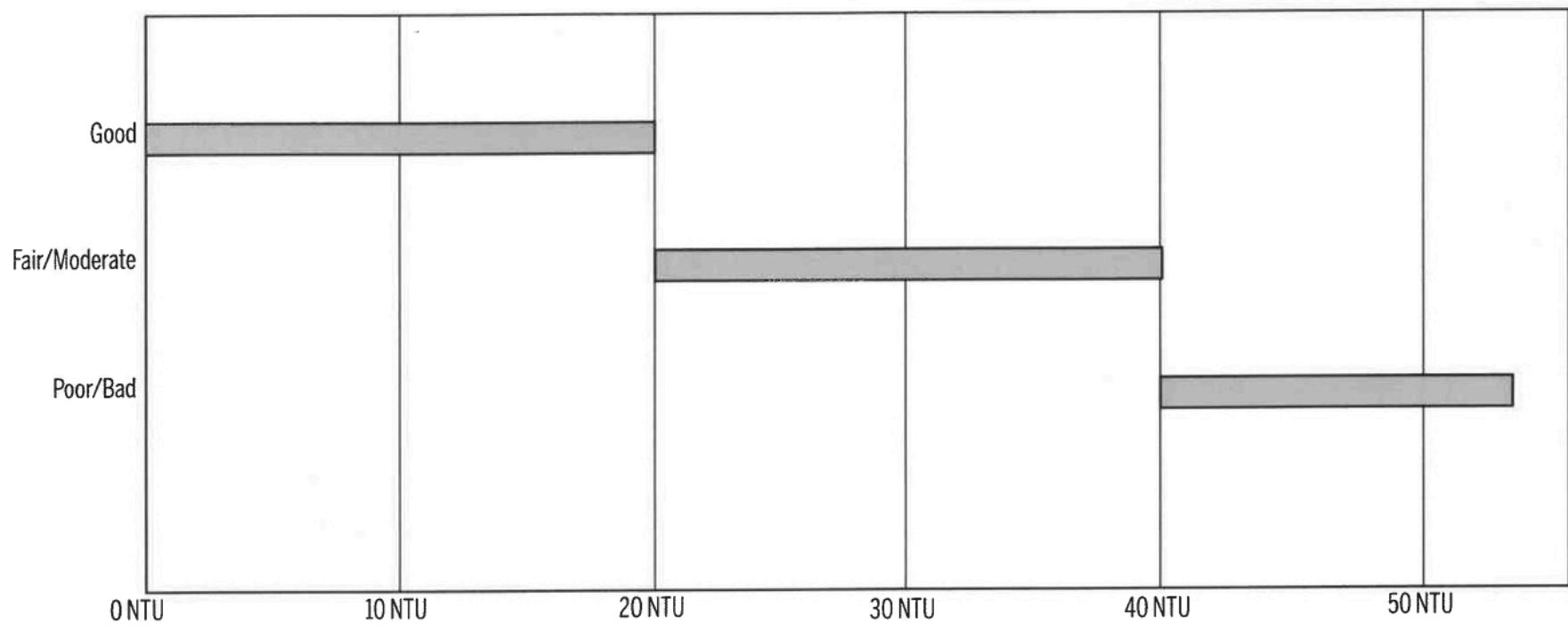
## Optimum Temperature Limits for Aquatic Organisms

Compiled from Stream Scene, Streamkeepers Field Guide, DEQ Administrative Rules, Aquatic Project Wild, Investigating our Ecosystem



# Water Quality

## OPTIMUM TURBIDITY LEVELS FOR AQUATIC ORGANISM



NTU=nephelometric turbidity unit

### Standards:

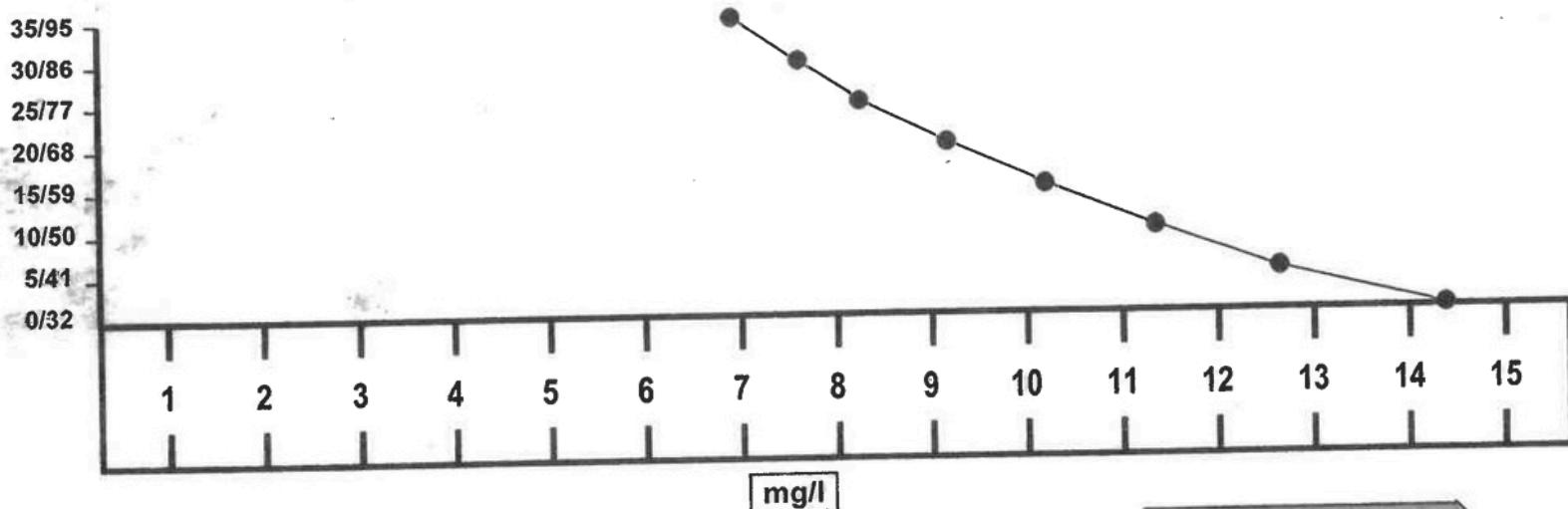
10 NTU: Level not to be exceeded for coldwater fisheries per state/federal water quality standards

50 NTU: Turbidity level which interferes with site feeding; level not to be exceeded in a type of river/stream per State/Federal water quality standards

Complied from information regarding water quality from the Oregon Department of Environmental Quality and the US Environmental Protection Agency.

°C / °F

### MAXIMUM DISSOLVED OXYGEN CONCENTRATION AT VARIOUS TEMPERATURES



EGG & ALEVIN INCUBATION

SALMONID GROWTH

SALMONID SPAWNING

CARP

MAYFLY

STONEFLY

MOSQUITO

POND SNAIL

CRAYFISH

OREGON WATER QUALITY

STANDARD for D.O.

SALMONID SPAWNING WATERS

mg/l

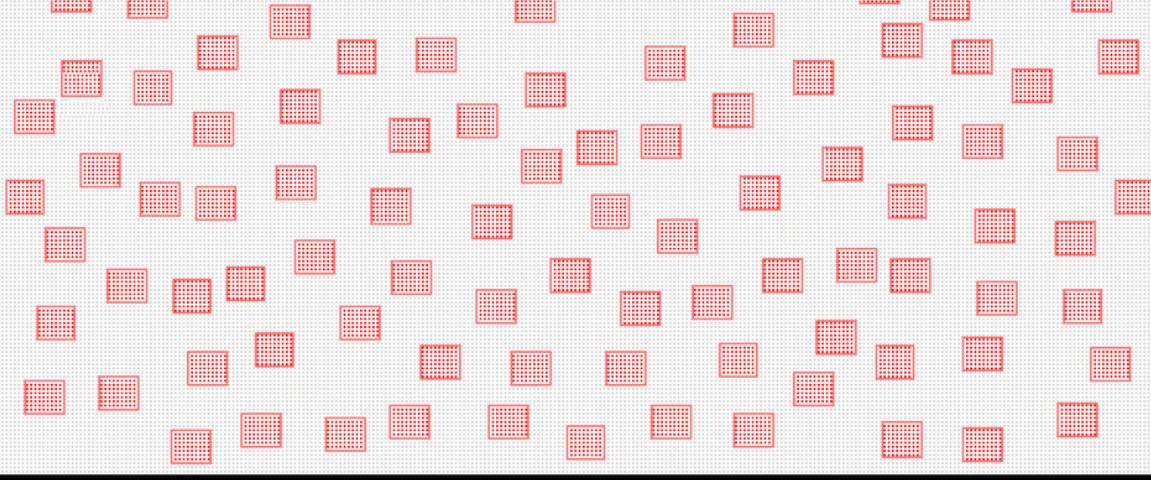
### OPTIMUM DISSOLVED OXYGEN LIMITS FOR AQUATIC ORGANISMS

Compiled from Streamkeepers Field Guide, DEQ Adminstrative Rules, Aquatic Project WILD, Stream Scene,  
Investigating Our Ecosystem.

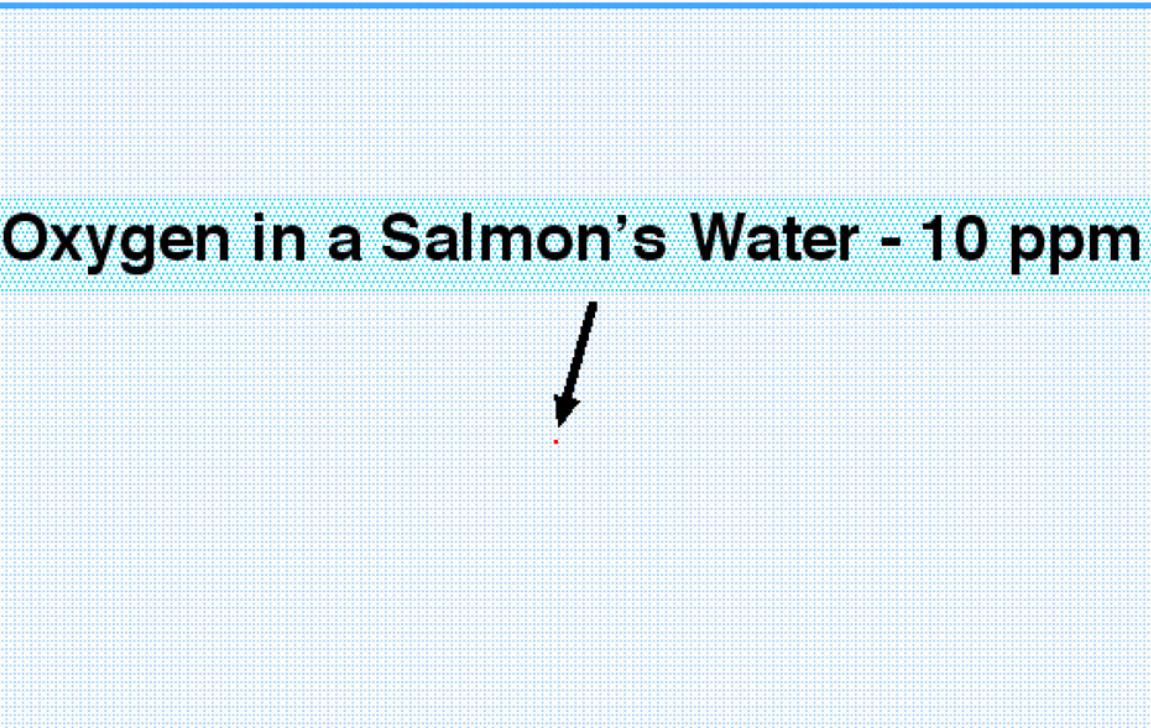


## Water Quality

**Oxygen in Our Atmosphere - 21%**



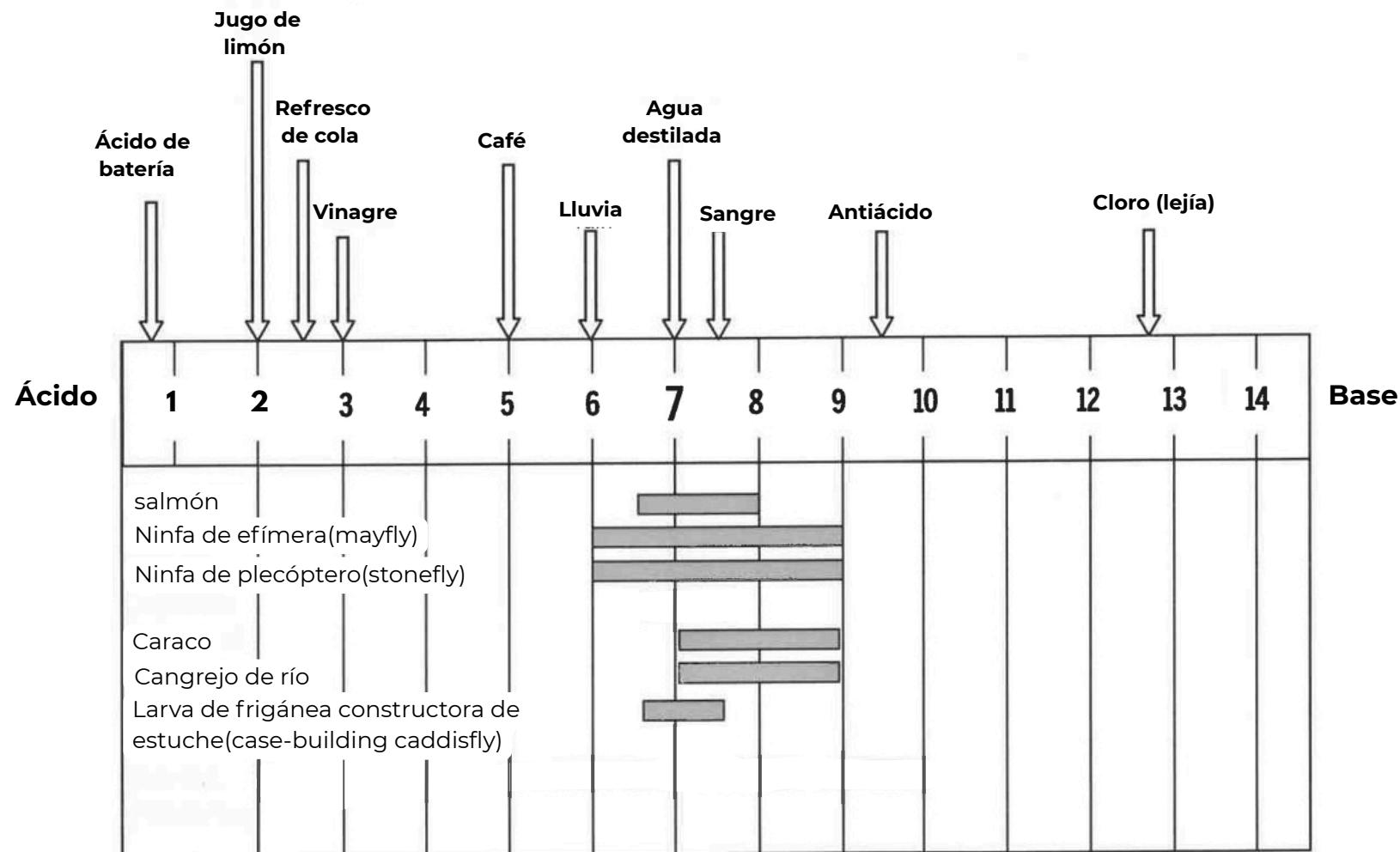
**Oxygen in a Salmon's Water - 10 ppm**





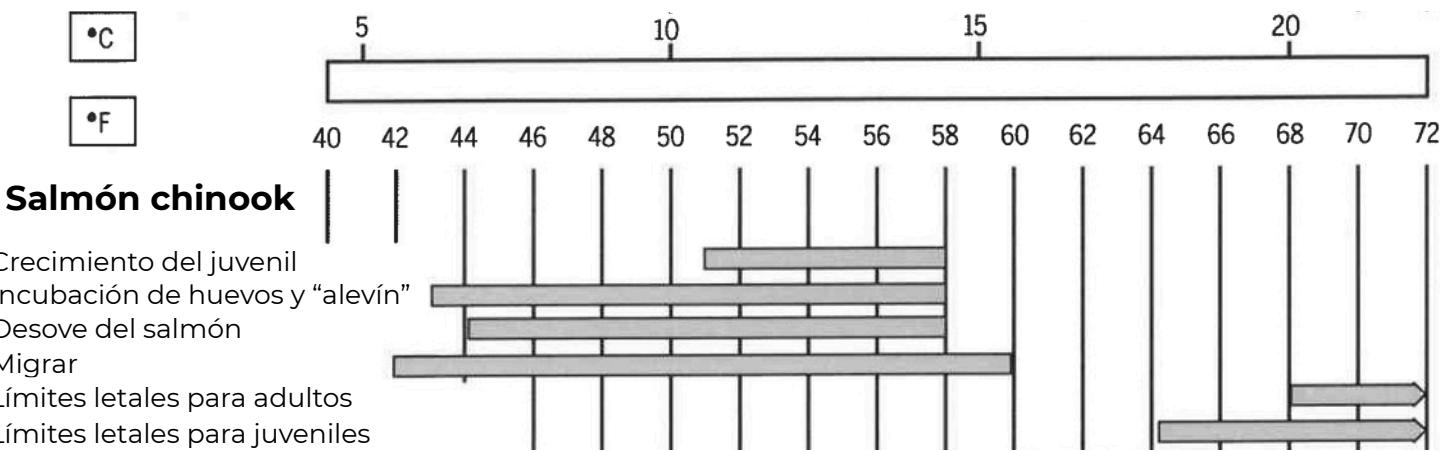
# Calidad del agua

## Límites letales de pH para organismos acuáticos





## Calidad del agua

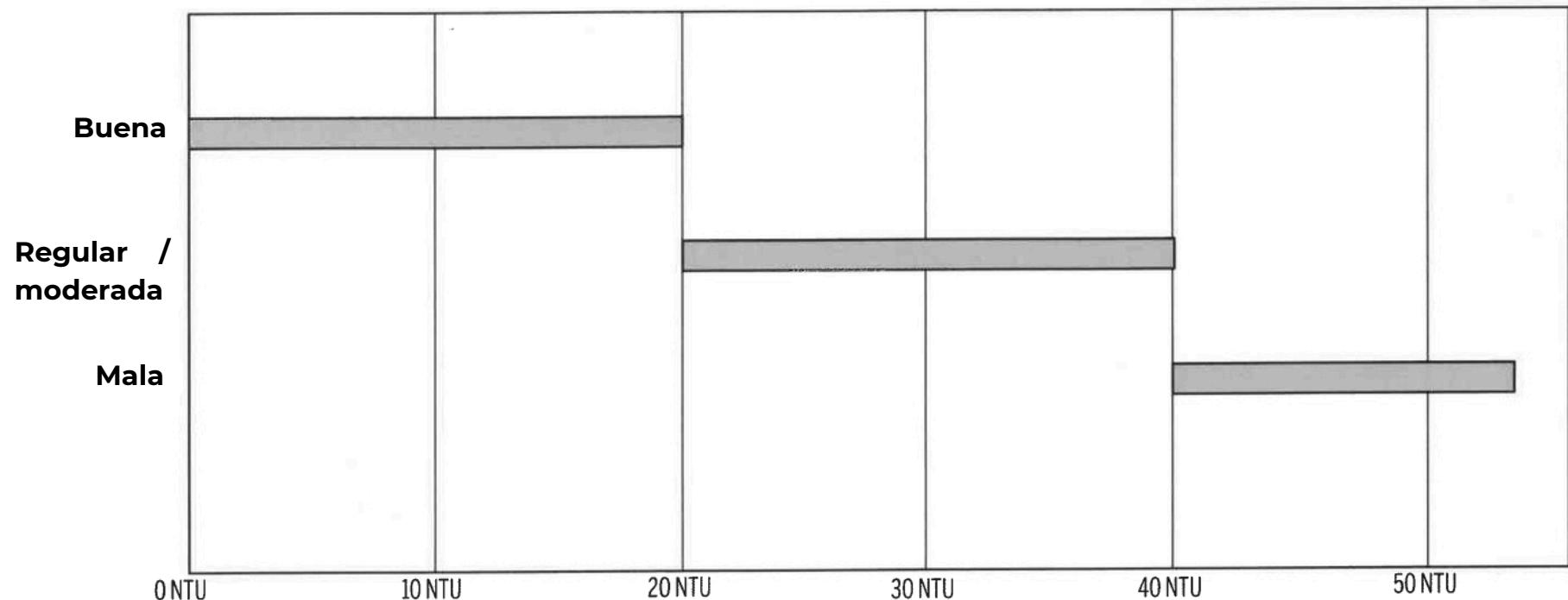


**Temperaturas óptimas para sostener las diferentes etapas  
del ciclo de vida del salmón**



## Calidad del agua

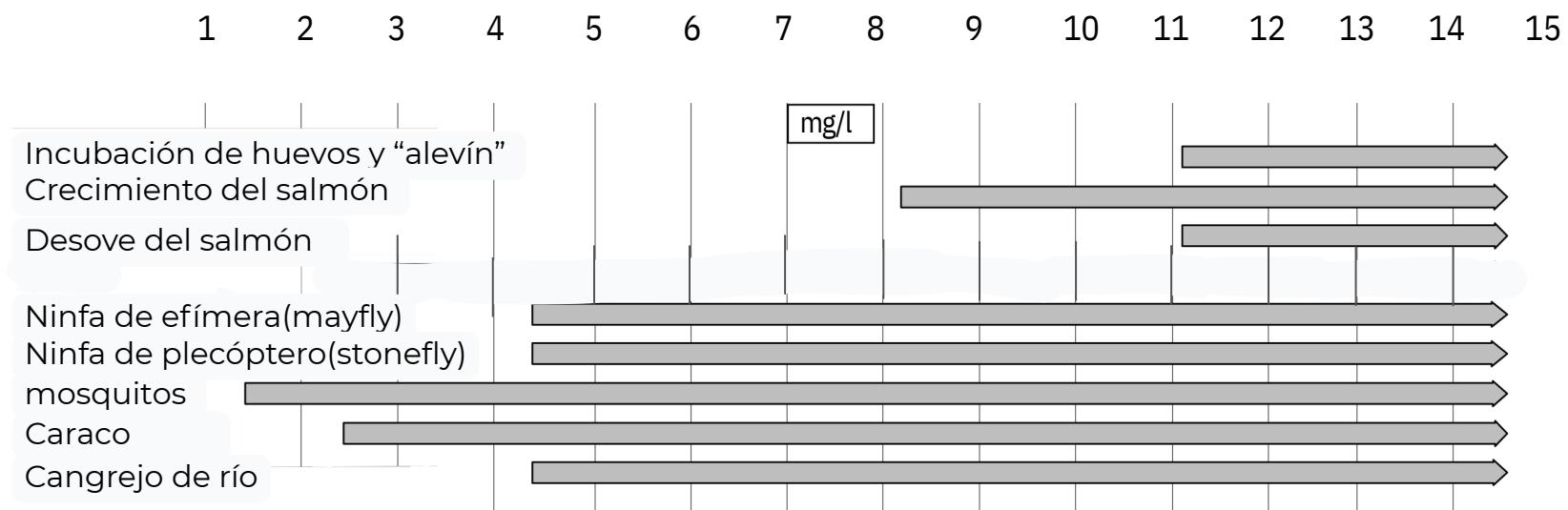
### Niveles óptimos de turbidez para organismos acuáticos





## Calidad del agua

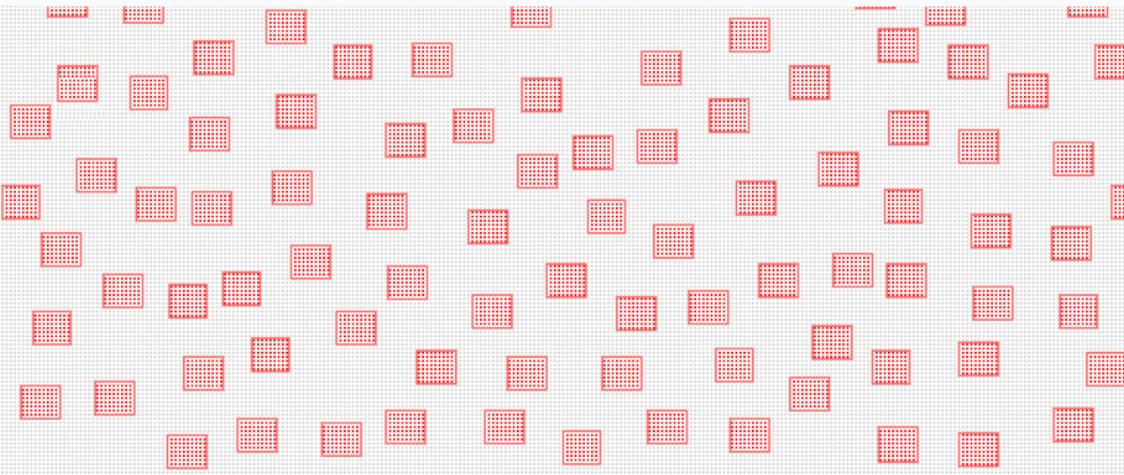
### Oxígeno disuelto óptimas para sostener las diferentes etapas del ciclo de vida del salmón





## Calidad del agua

Oxígeno en nuestro aire 21%



Oxígeno en el agua del salmón.

Los salmones solo necesitan diez partes de  
oxígeno por cada millón de partes de agua.

