

2016 Lake Ontario

Salmon Symposium

Salmon & Trout Movement



Port Credit
Salmon and Trout Association



Ontario

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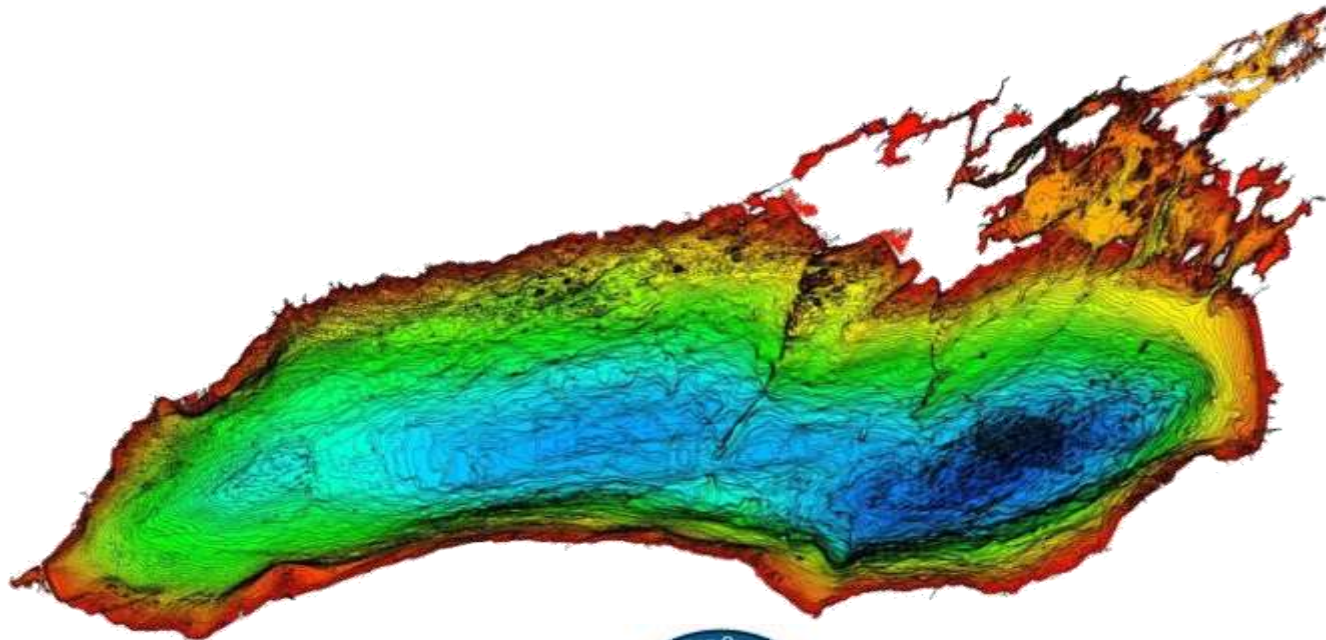


Lake Ontario - Salmon Symposium

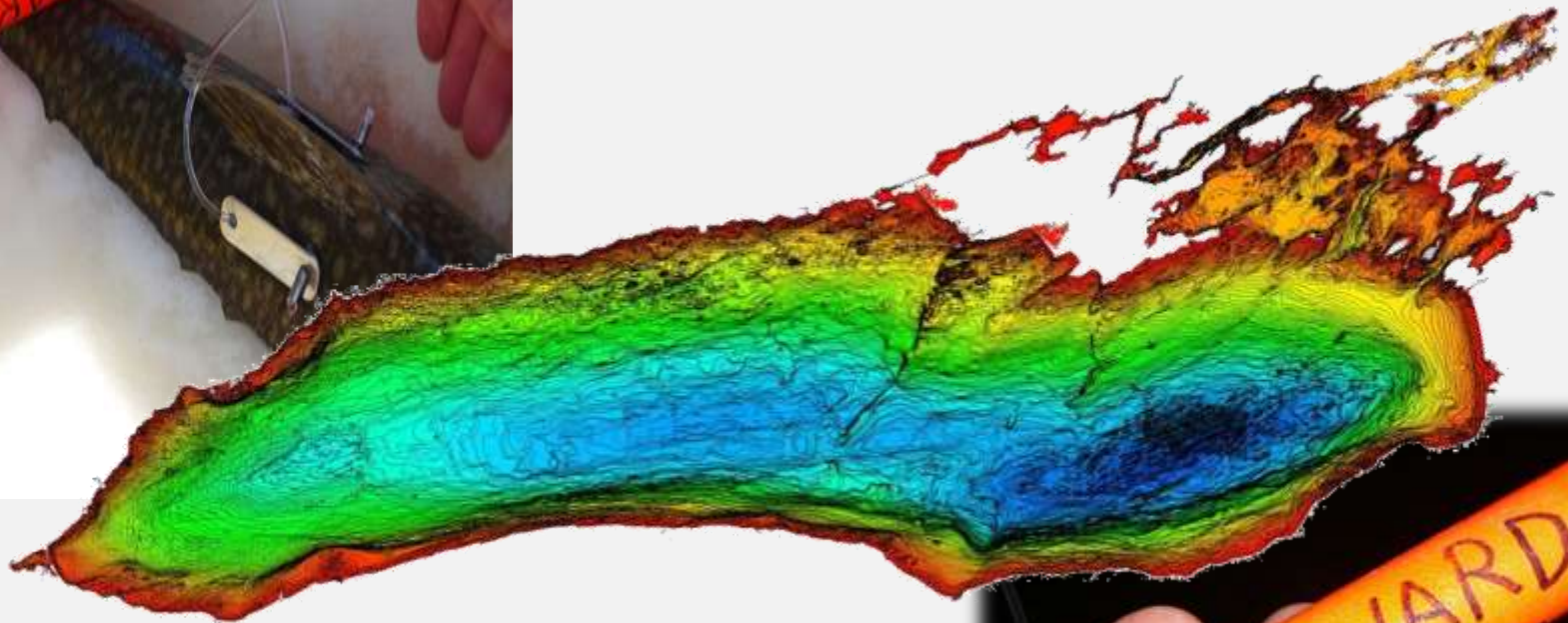
Salmon & Trout Movement

Dr. Aaron Fisk (University of Windsor) and Dr. Tim Johnson (OMNRF)

Port Credit - April 2016



Salmon & Trout Movement Lake Ontario Pop-Off Tag Study



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Salmon & Trout Movement Lake Ontario Pop-Off Tag Study

- Track salmon and trout movement to understand habitat use patterns
- Tags record: time and date, depth and temperature
- Tags are set to pop off and are found by the public
- **\$100 reward**





Summary



- Focus is Chinook Salmon, Rainbow Trout, Brown Trout, Lake Trout, and Atlantic Salmon
- Goal is to tag 112 fish split between NY and ON waters
- 77 tags are out there now
- Tags are programmed to pop off after a year

**Rainbow tagged on Sept 17 and
recovered Oct 11**

277 Km

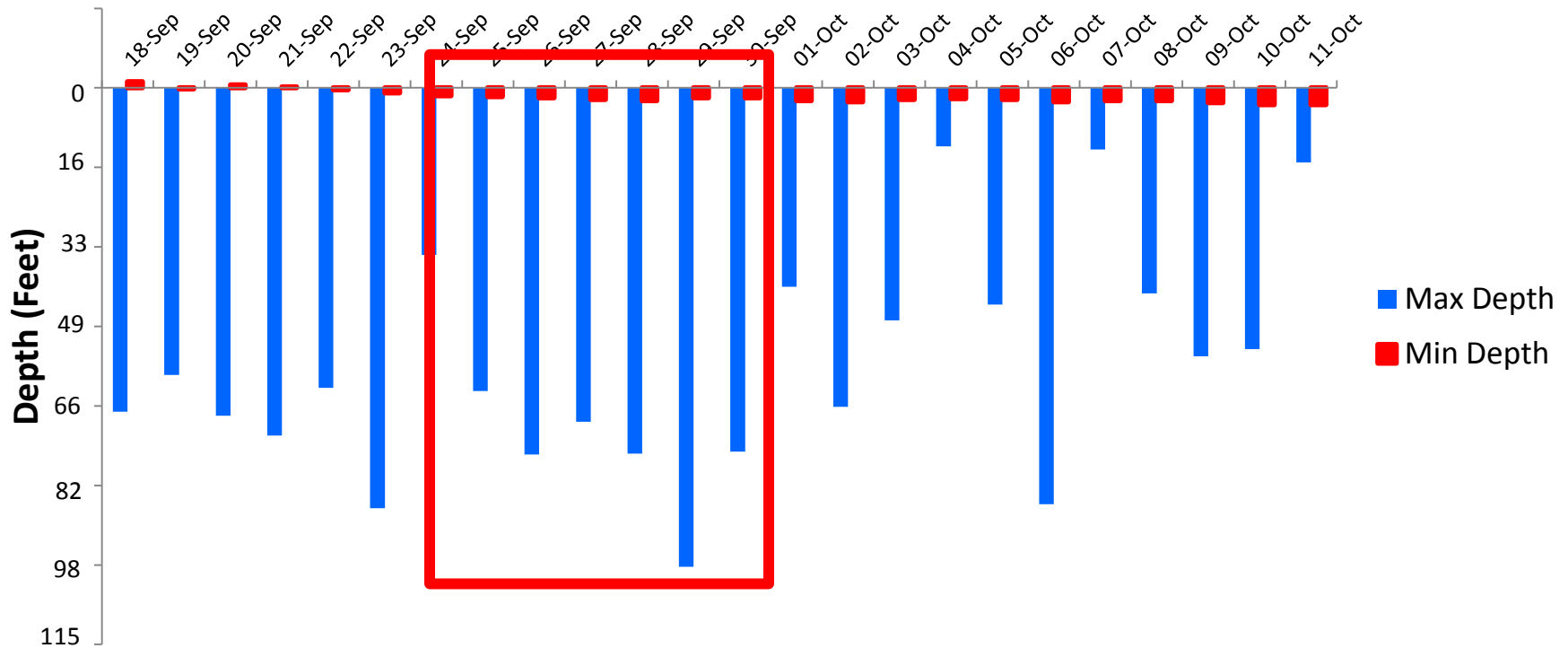


Rainbow behaviour over three weeks

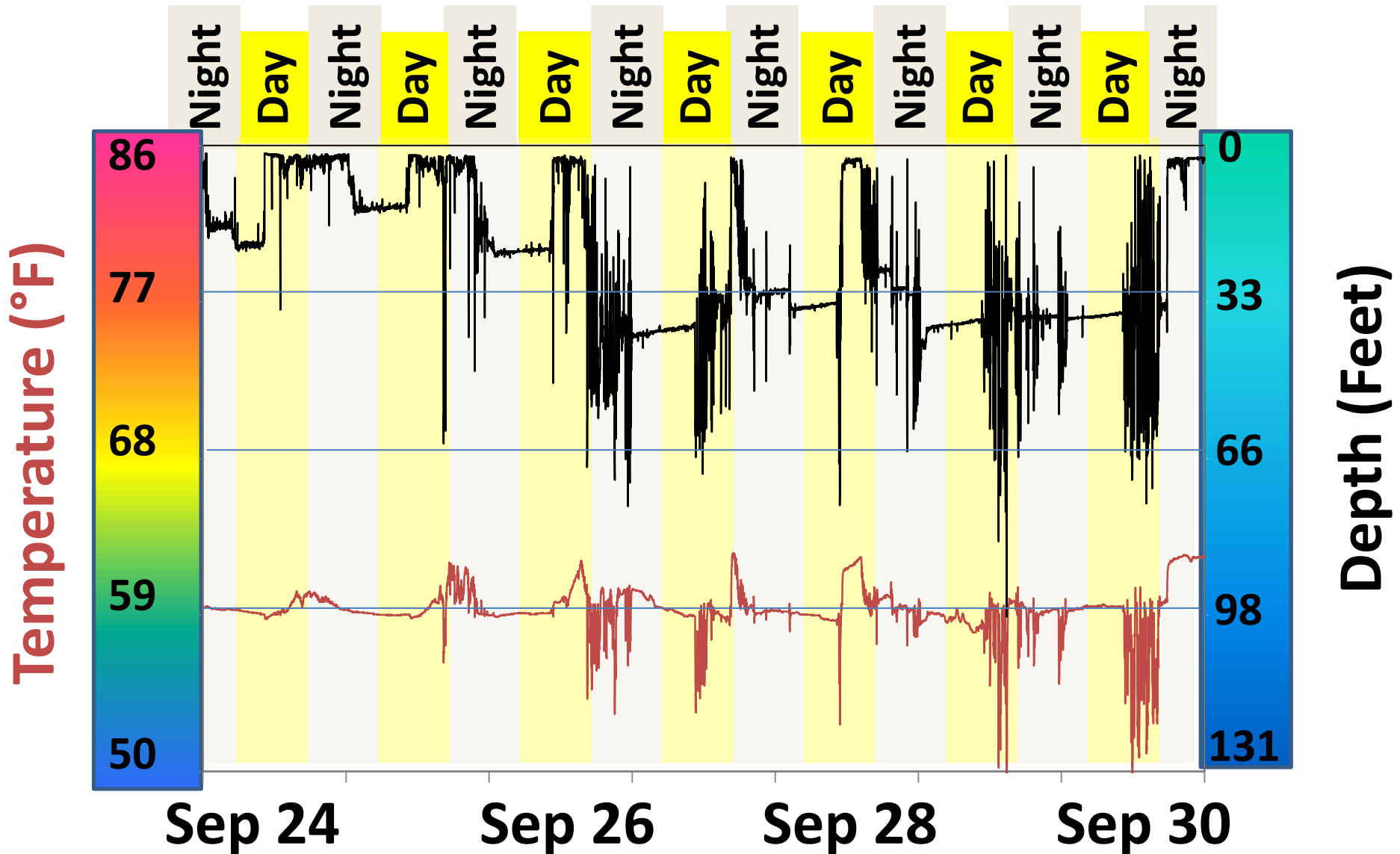
Min & Max Depth

Port Credit

Pulaski



Lake Ontario Steelhead Daily Movement



Chinook Salmon

Date Released

September 17, 2014

Fish Length

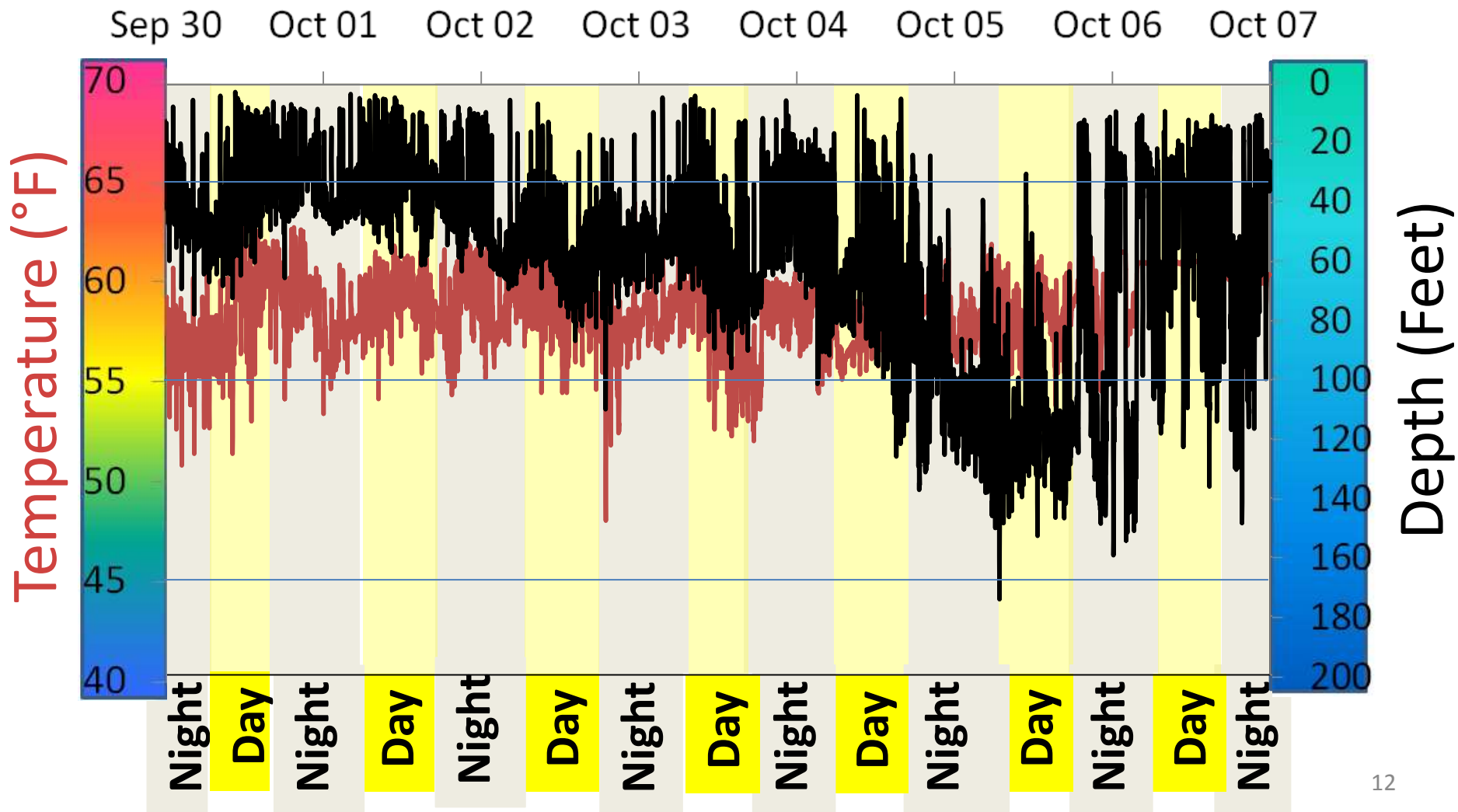
18.5 inches

Tag Located

August 15, 2015



Lake Ontario Chinook Salmon Daily Movement



Weather in Toronto - October 9, 2014




Sunrise: 7:24

Sunset: 18:46

Thursday

00:00 to 7:00

Clear 

Wind Speed
(km/h) 11.57

Thursday

7:00 to 13:00

Clear 

Wind Speed
(km/h) 28.42

Thursday


13:00 to 22:00

Cloudy 

Wind Speed
(km/h) 25.4

Thursday

22:00 to 24:00

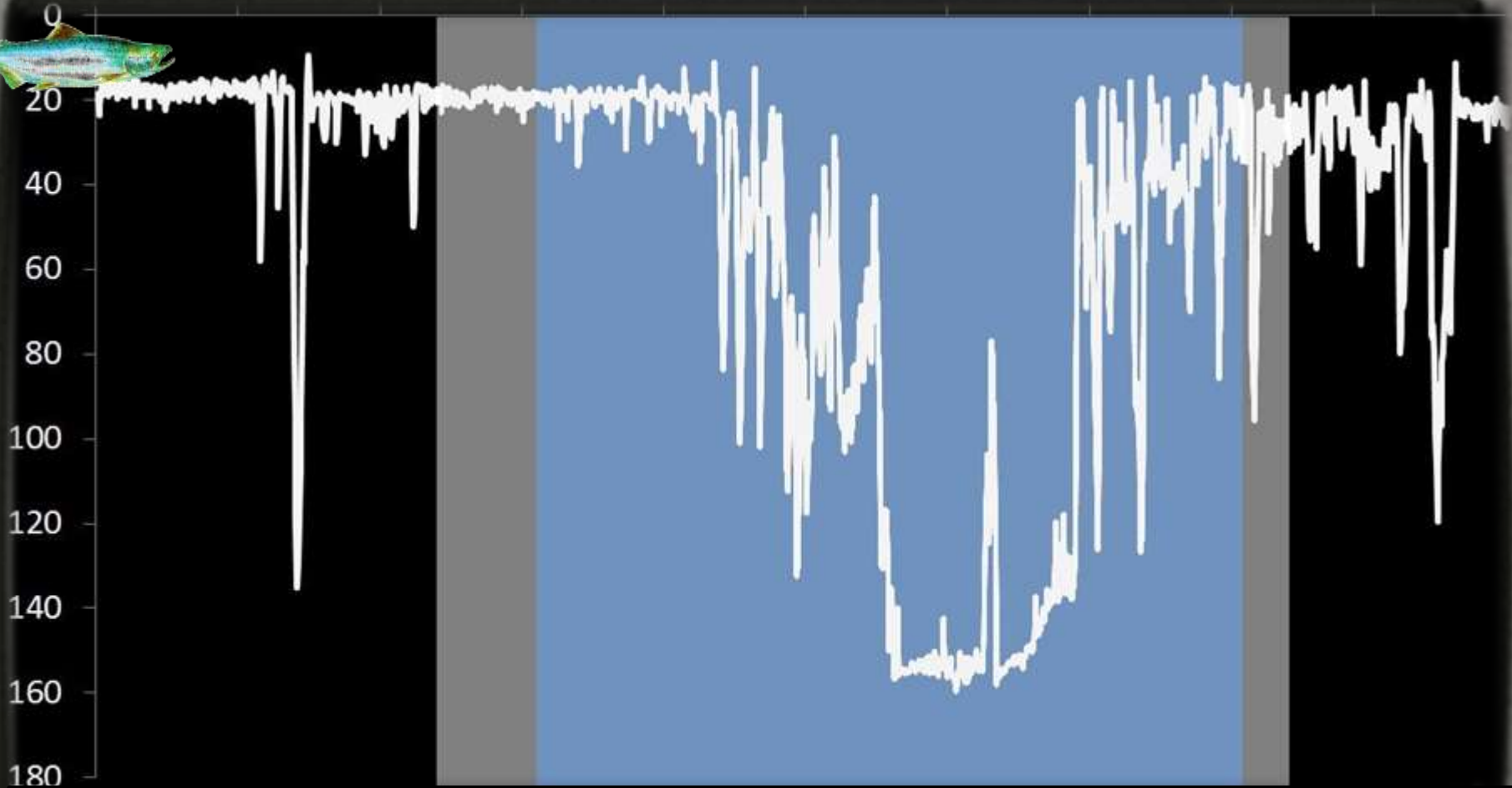
Clear 

Wind Speed
(km/h) 11

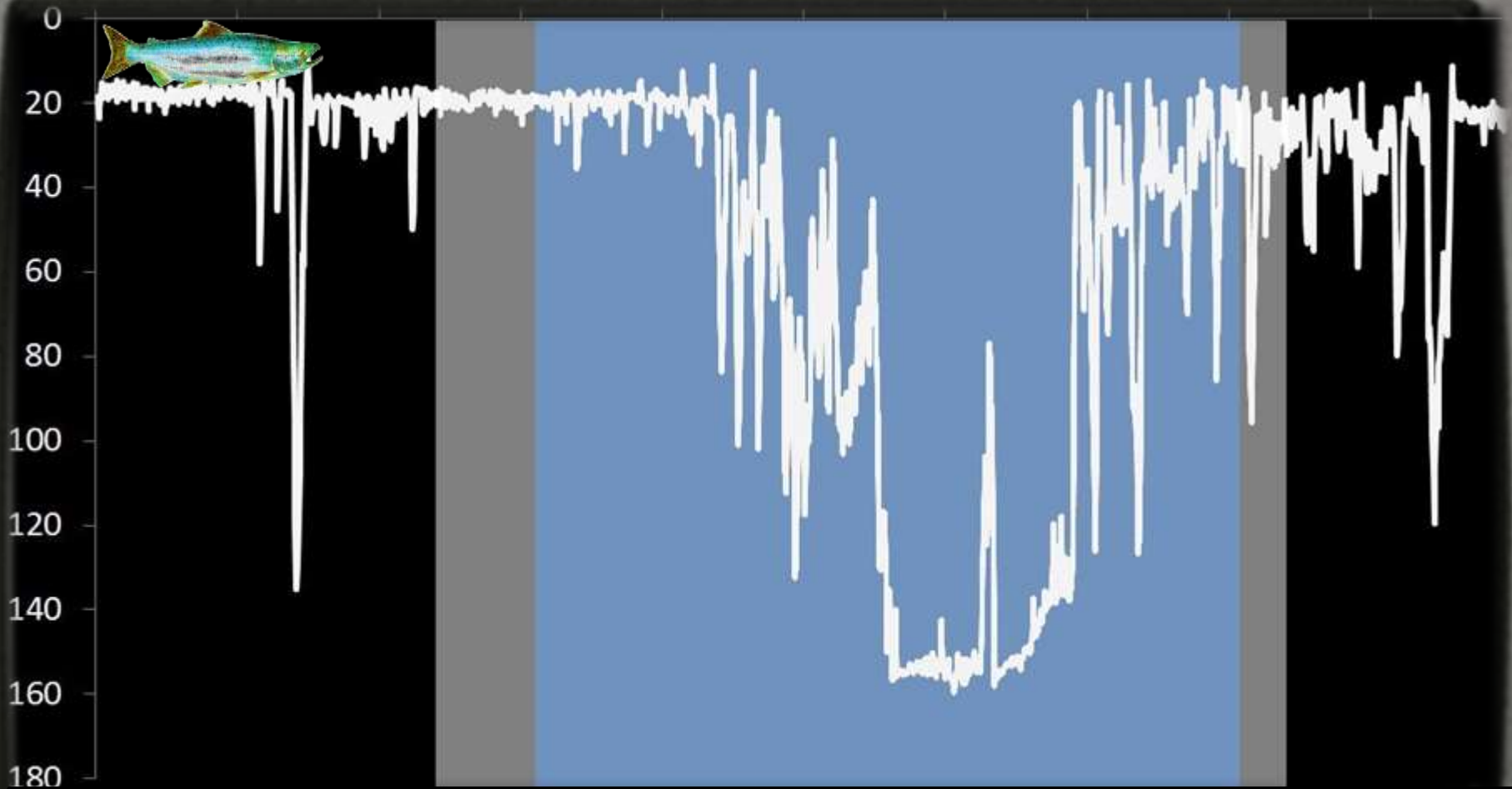
Night

Day

Night



18.76 Depth (feet)	59.4 Temperature (°F)	18.76/0 Rate (Feet/Minute)	00:00 am Time (Minute)	Max 18.76
				Min



16.11

Depth
(feet)

59.3

Temperature
(°F)

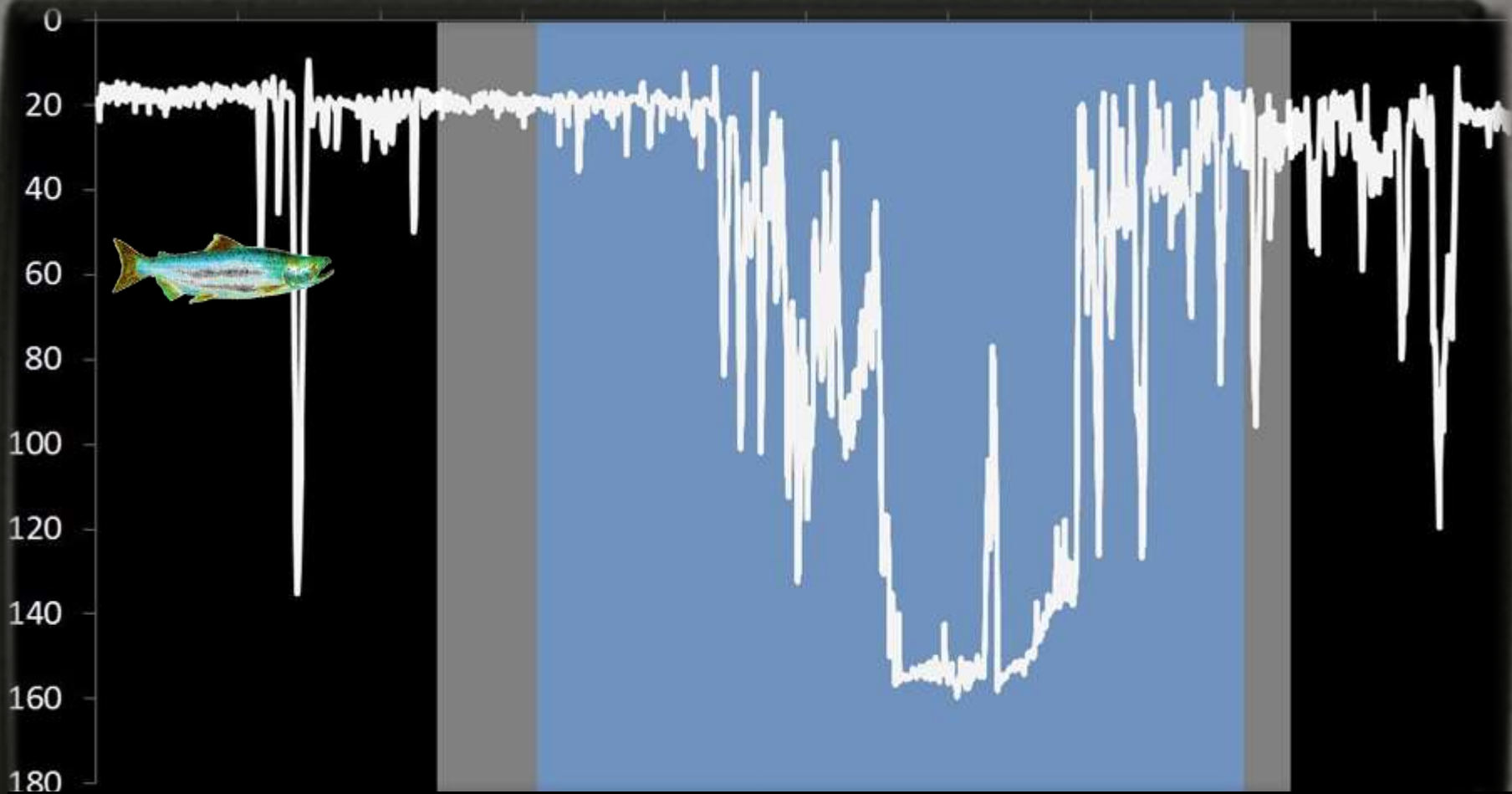
Rate
(Feet/Minute)

2:43 am

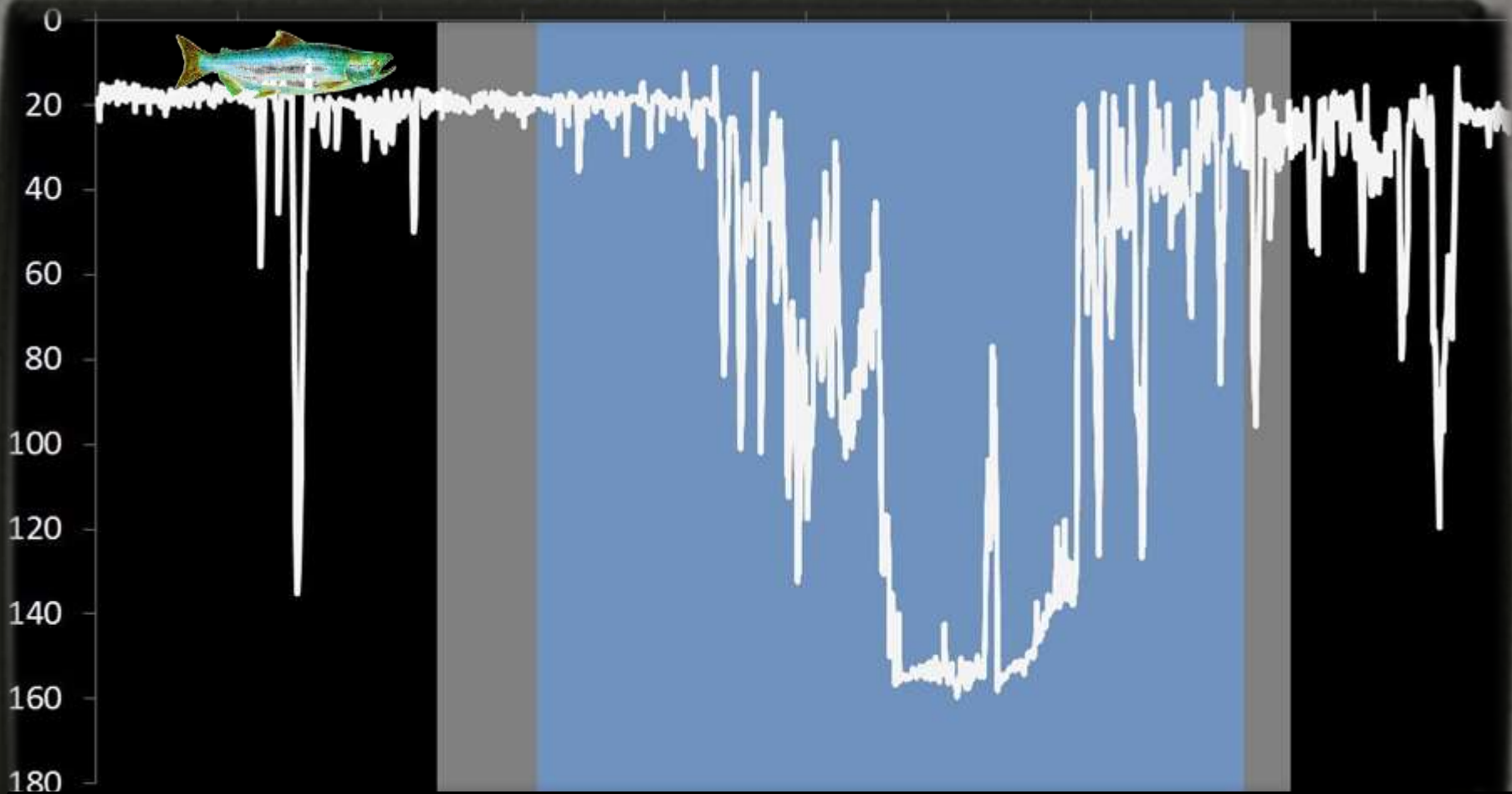
Time
(Minute)

Max
23.49

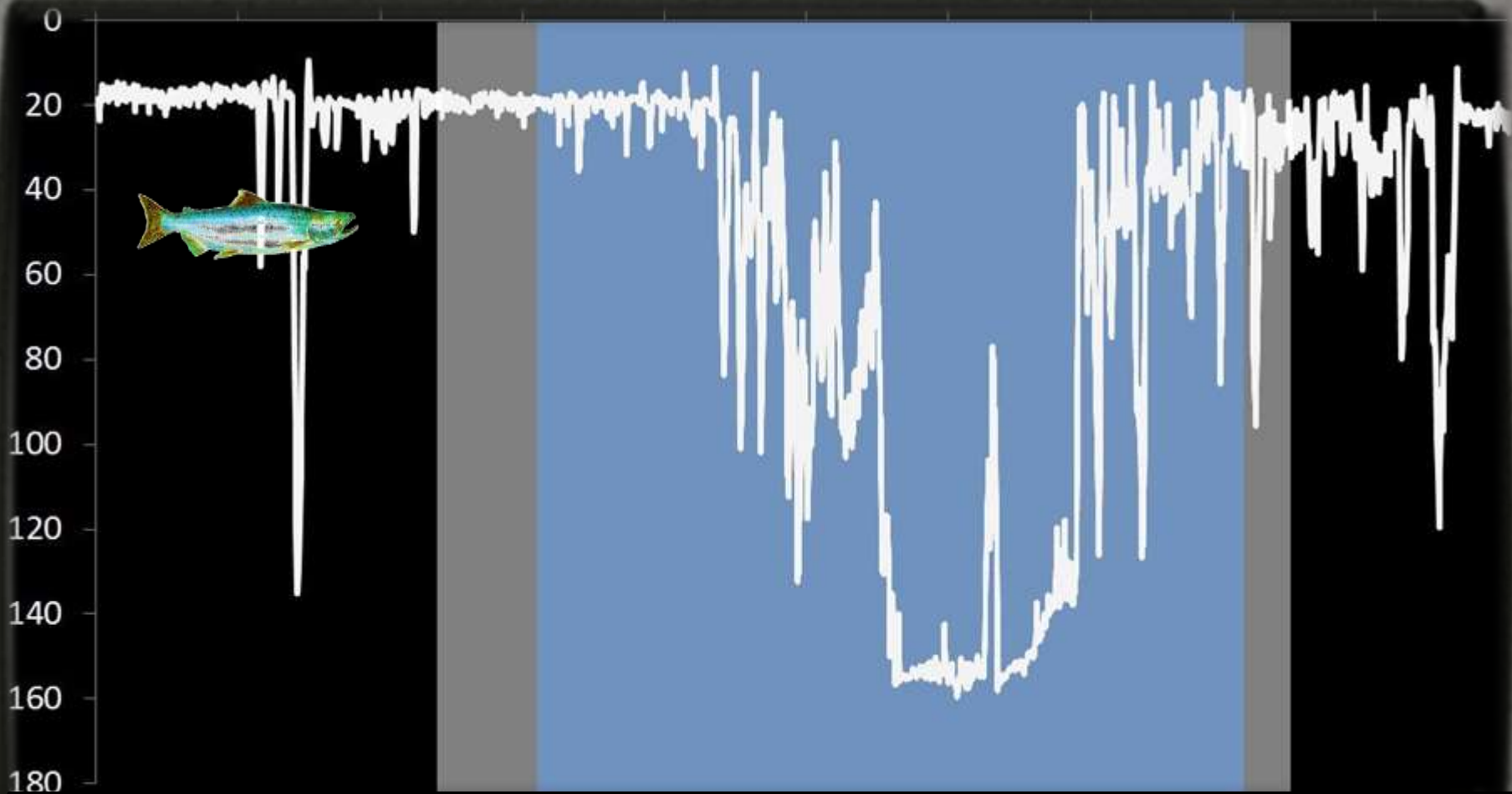
Min
14.67



57.94 Depth (feet)	59.3 Temperature (°F)	41.83/4 Rate (Feet/Minute)	2:47 am Time (Minute)	Max 57.94
				Min 11.61



15.09	59.5	42.85/4	2:51 am	Max 57.94
Depth (feet)	Temperature (°F)	Rate (Feet/Minute)	Time (Minute)	Min 15.09



45.44

Depth
(feet)

59.6

Temperature
(°F)

30.4/14

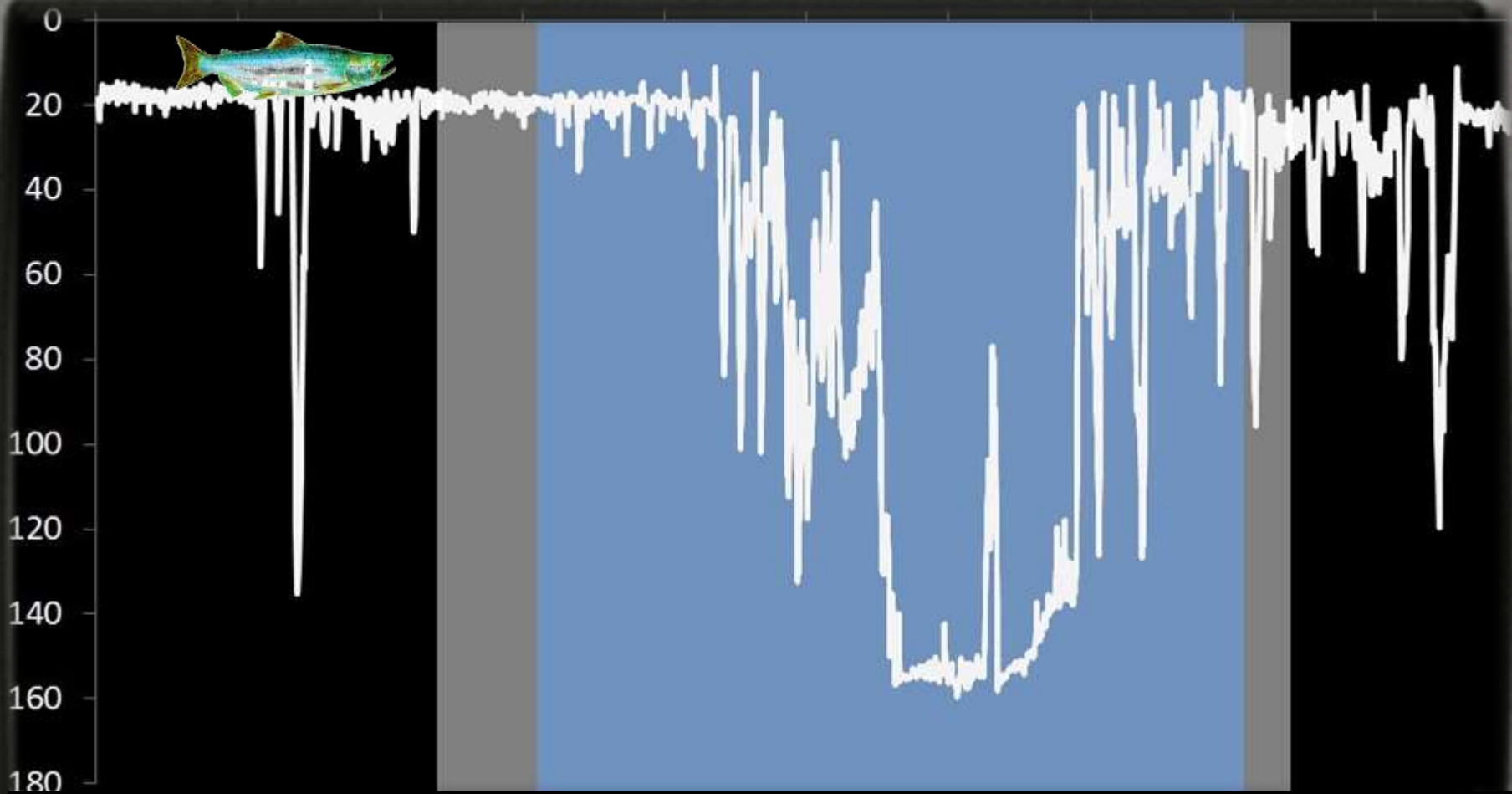
Rate
(Feet/Minute)

3:05 am

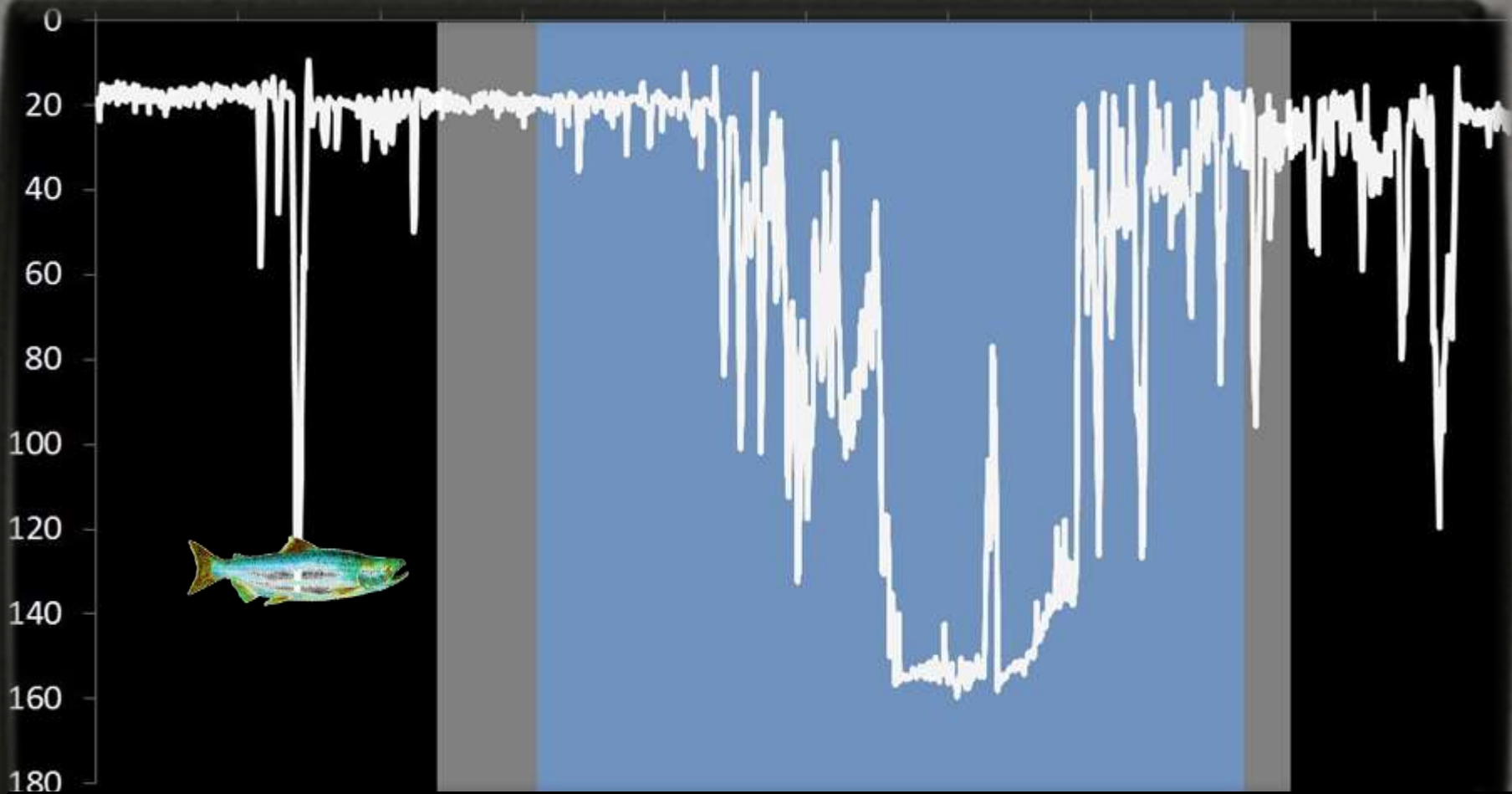
Time
(Minute)

Max
45.44

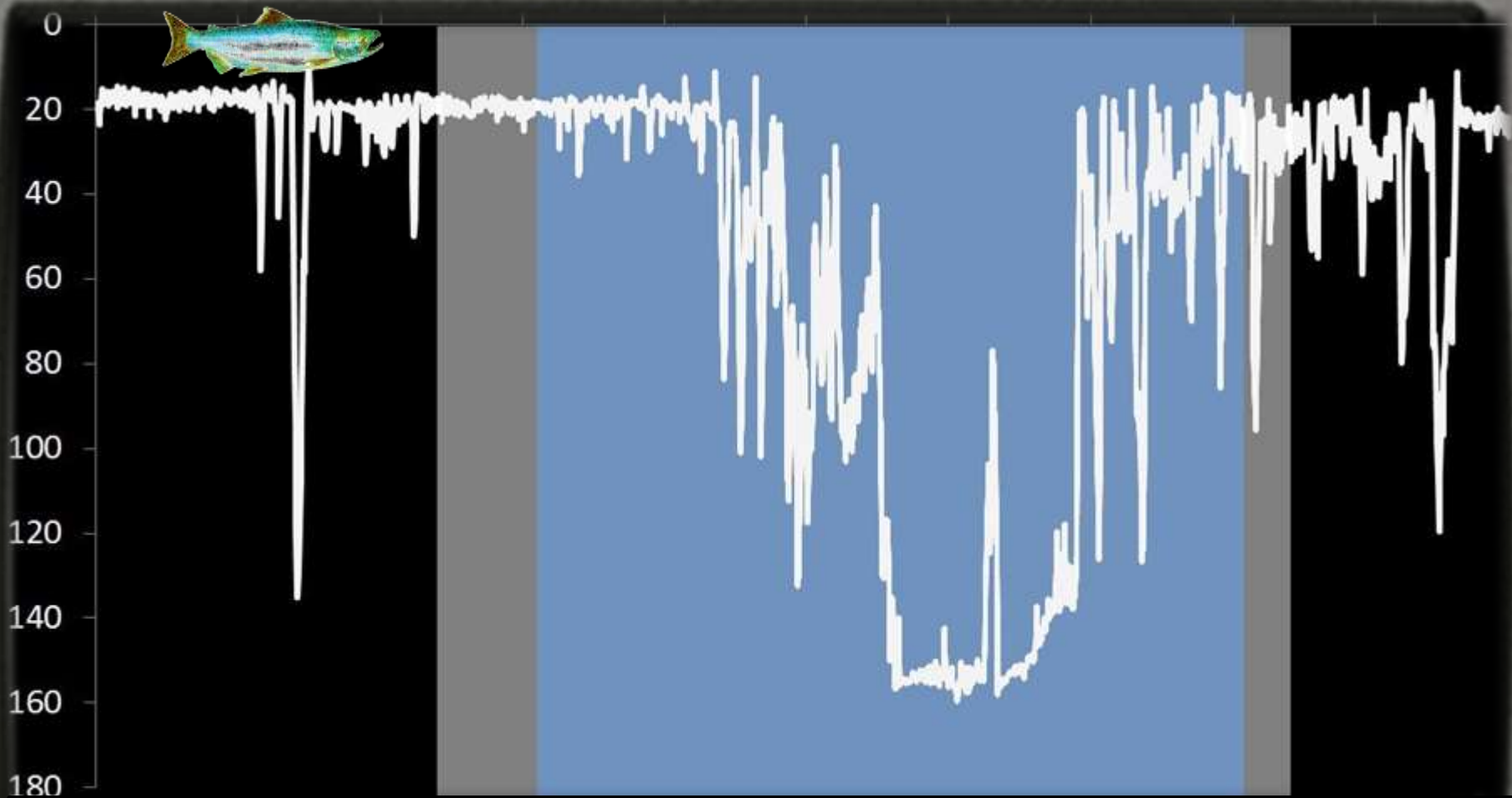
Min
15.09



15.10	59.6	30.3/3	3:08 am	Max 45.44
Depth (feet)	Temperature (°F)	Rate (Feet/Minute)	Time (Minute)	Min 15.10



135.04	59.2	120/16	3:24 am	Max 135.01
Depth (feet)	Temperature (°F)	Rate (Feet/Minute)	Time (Minute)	Min 15.09



9.55

Depth
(feet)

59.6

Temperature
(°F)

125/11

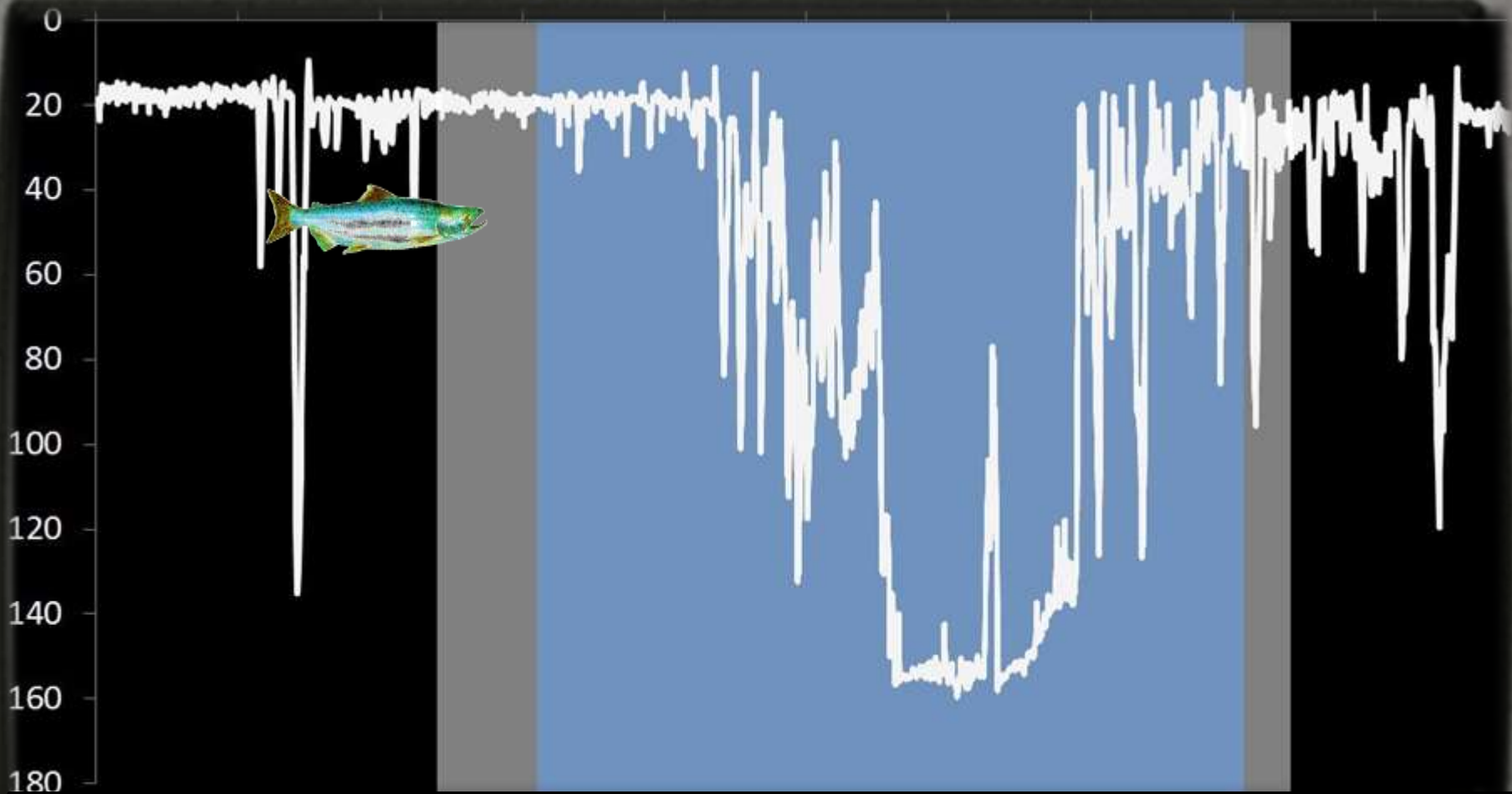
Rate
(Feet/Minute)

3:35 am

Time
(Minute)

Max
135.01

Min
9.55



49.93

Depth
(feet)

59.7

Temperature
(°F)

31.56/5

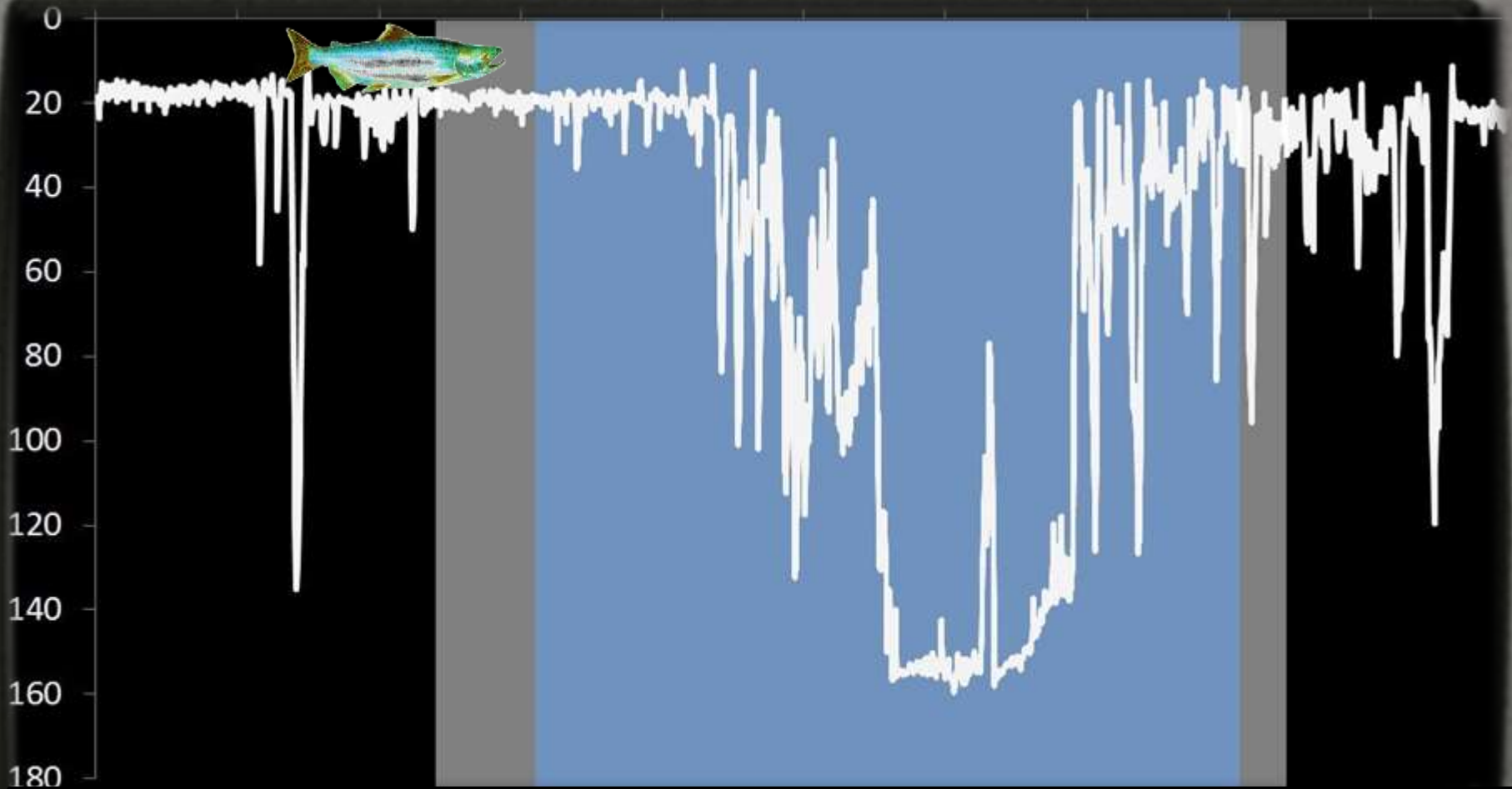
Rate
(Feet/Minute)

5:22 am

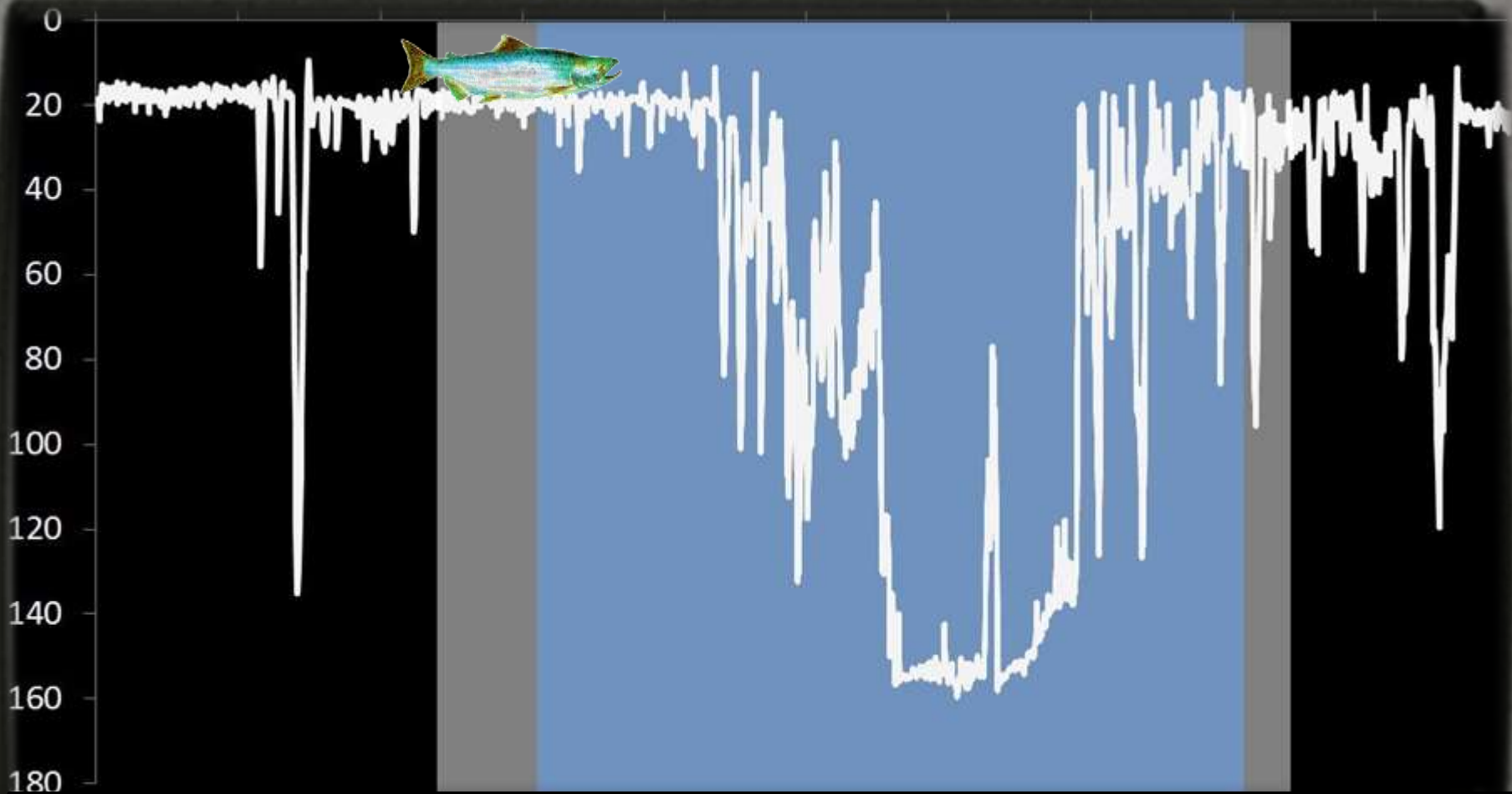
Time
(Minute)

Max
49.93

Min
18.37



16.29	59.7	33.64/8	5:30 am	Max 49.93
Depth (feet)	Temperature (°F)	Rate (Feet/Minute)	Time (Minute)	Min 16.29



10.99

Depth
(feet)

59.5

Temperature
(°F)

Rate
(Feet/Minute)

10:27am

Time
(Minute)

Max
35.60

Min
10.99

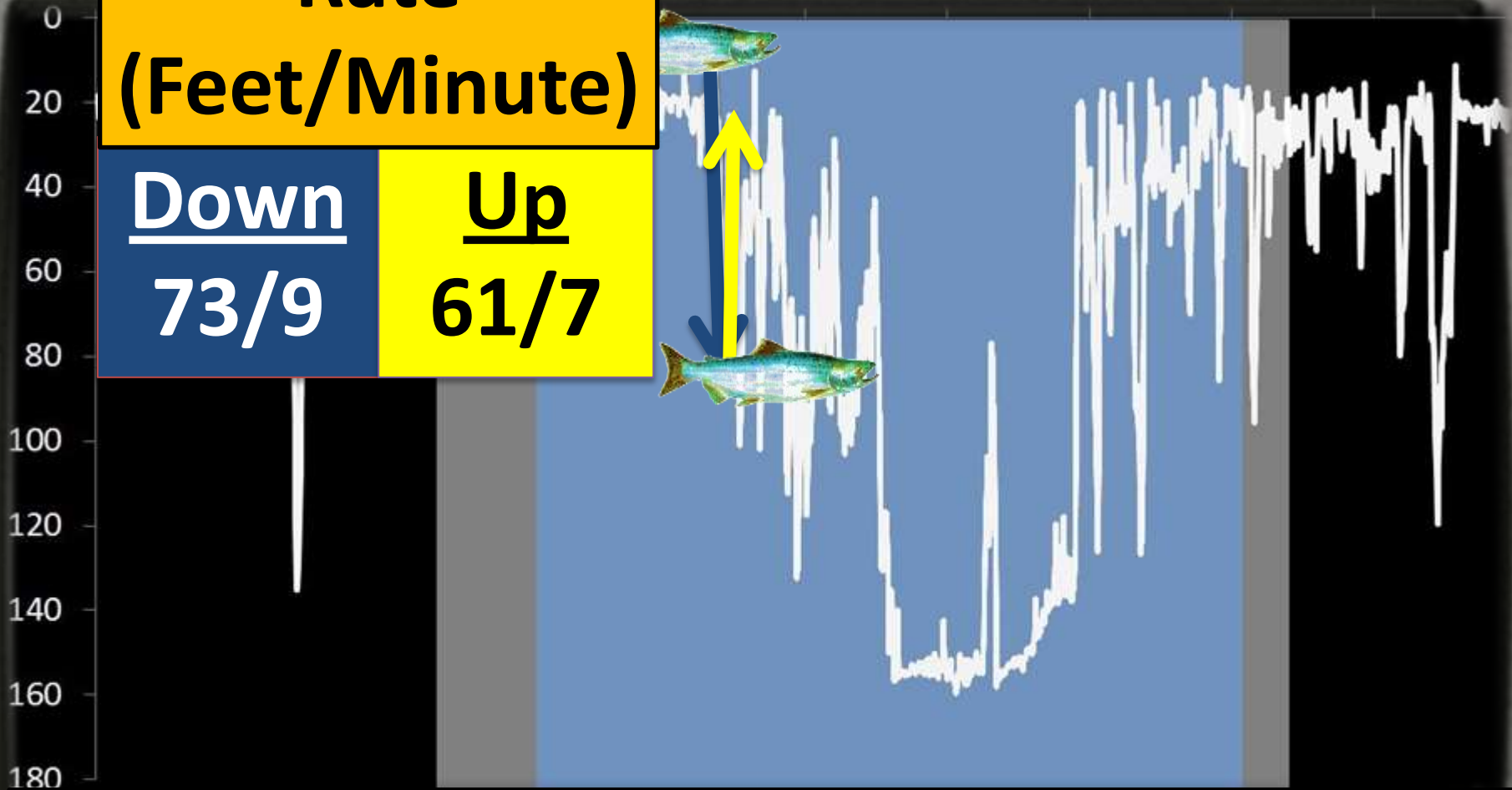
**Rate
(Feet/Minute)**

Down

73/9

Up

61/7



**Depth
(feet)**

**Temperature
(°F)**

**Rate
(Feet/Minute)**

**Time
(Minute)**

**Max
112.3**

**Min
10.99**

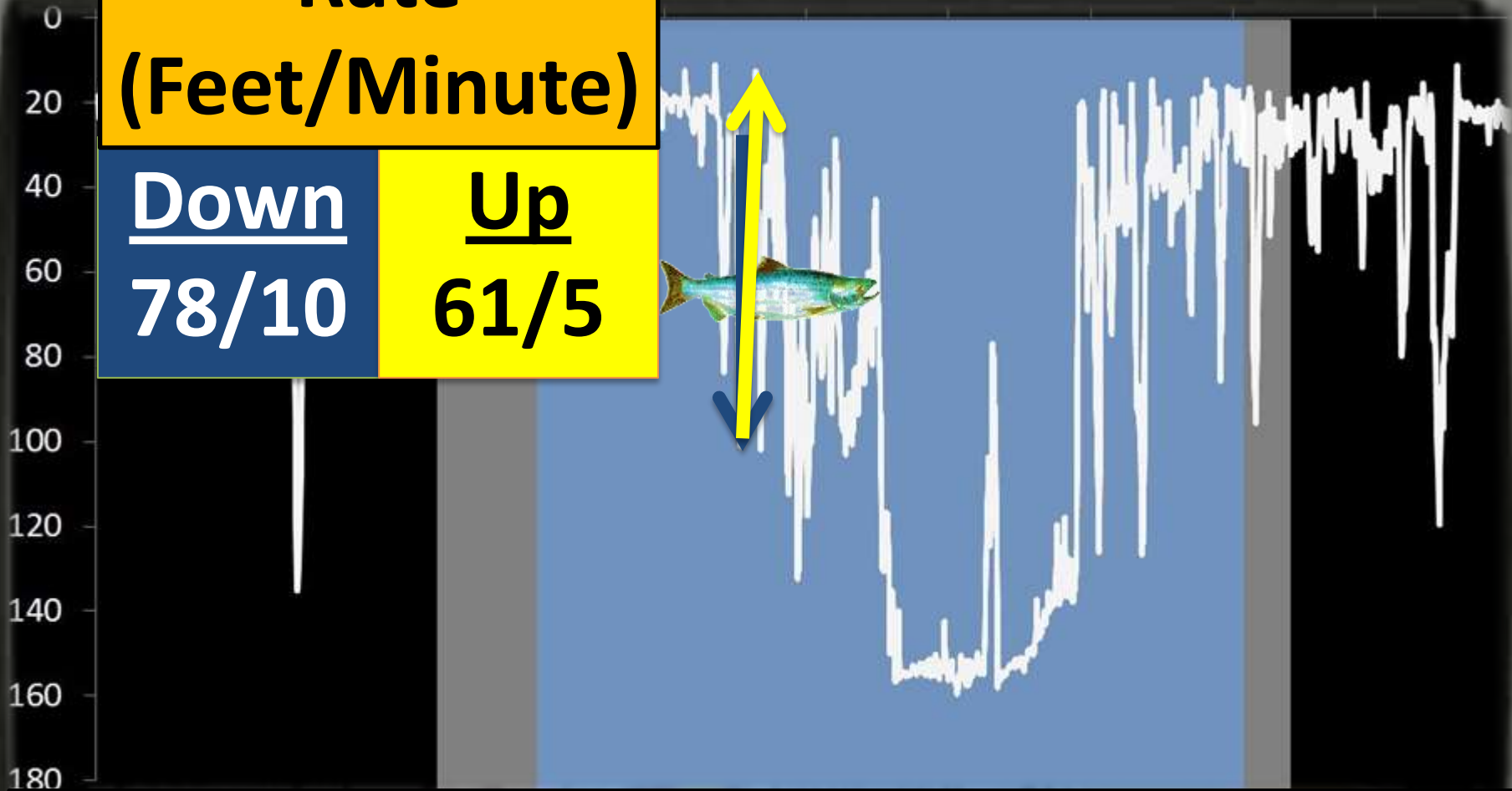
Rate (Feet/Minute)

Down

78/10

Up

61/5



Depth
(feet)

Temperature
(°F)

Rate
(Feet/Minute)

Time
(Minute)

Max

112.3

Min

10.99

Rate (Feet/Minute)

Down

90/6

Up

80/12



Depth
(feet)

Temperature
(°F)

Rate
(Feet/Minute)

Time
(Minute)

Max
112.3

Min
10.99

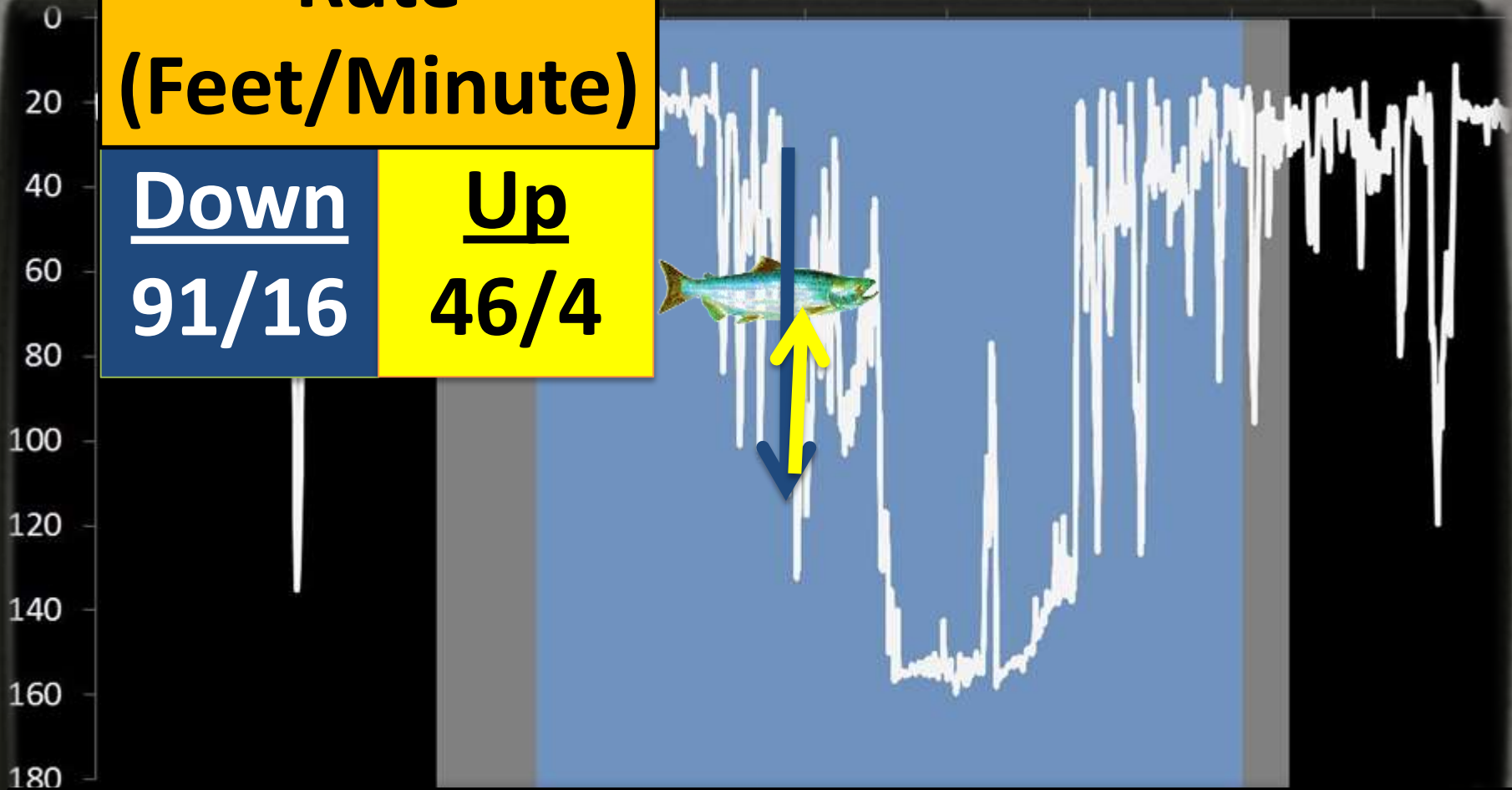
Rate (Feet/Minute)

Down

91/16

Up

46/4



Depth
(feet)

Temperature
(°F)

Rate
(Feet/Minute)

Time
(Minute)

Max
112.3

Min
10.99

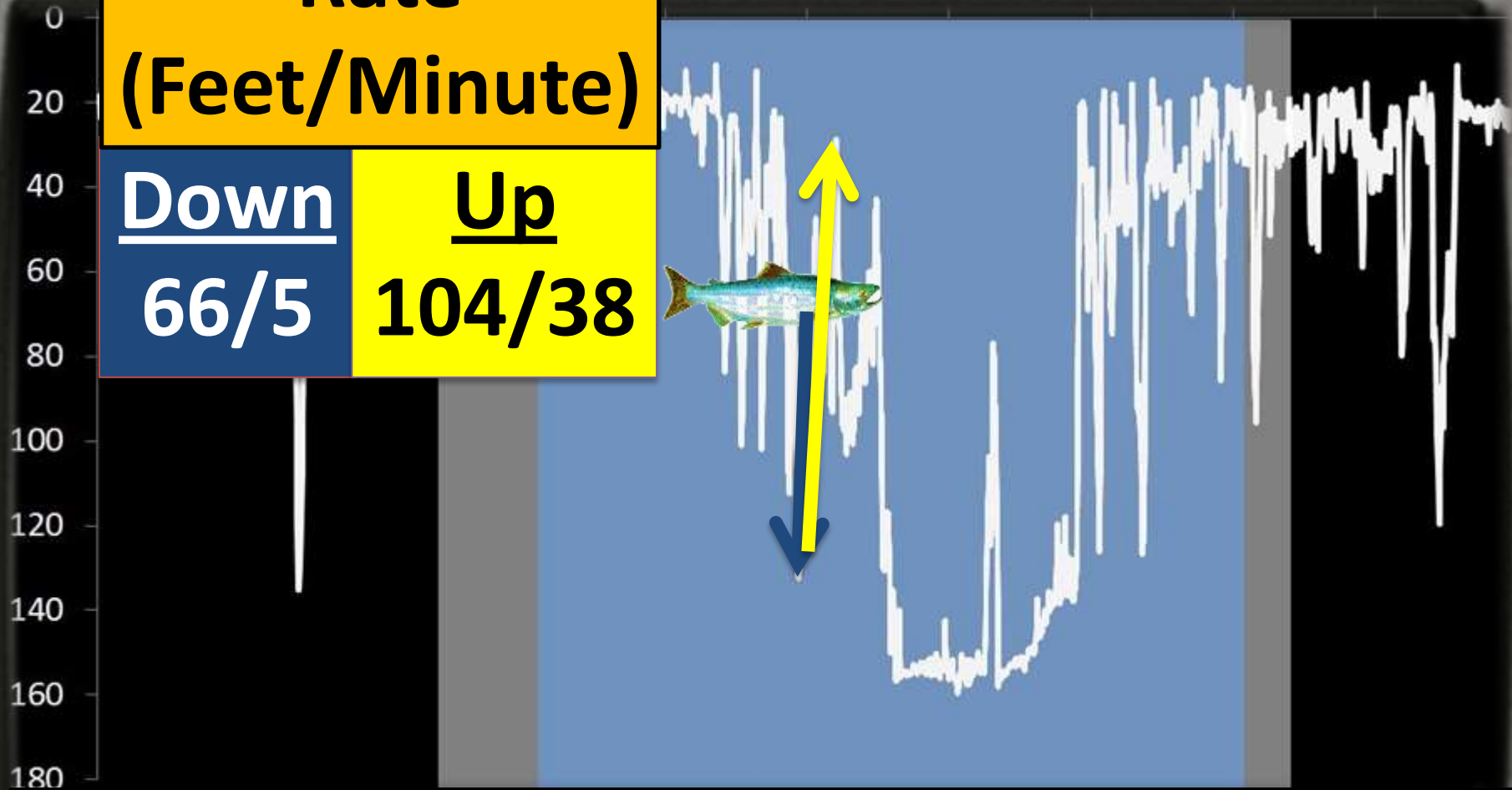
Rate (Feet/Minute)

Down

66/5

Up

104/38



Depth
(feet)

Temperature
(°F)

Rate
(Feet/Minute)

Time
(Minute)

Max
155.9

Min
12.40

Rate (Feet/Minute)

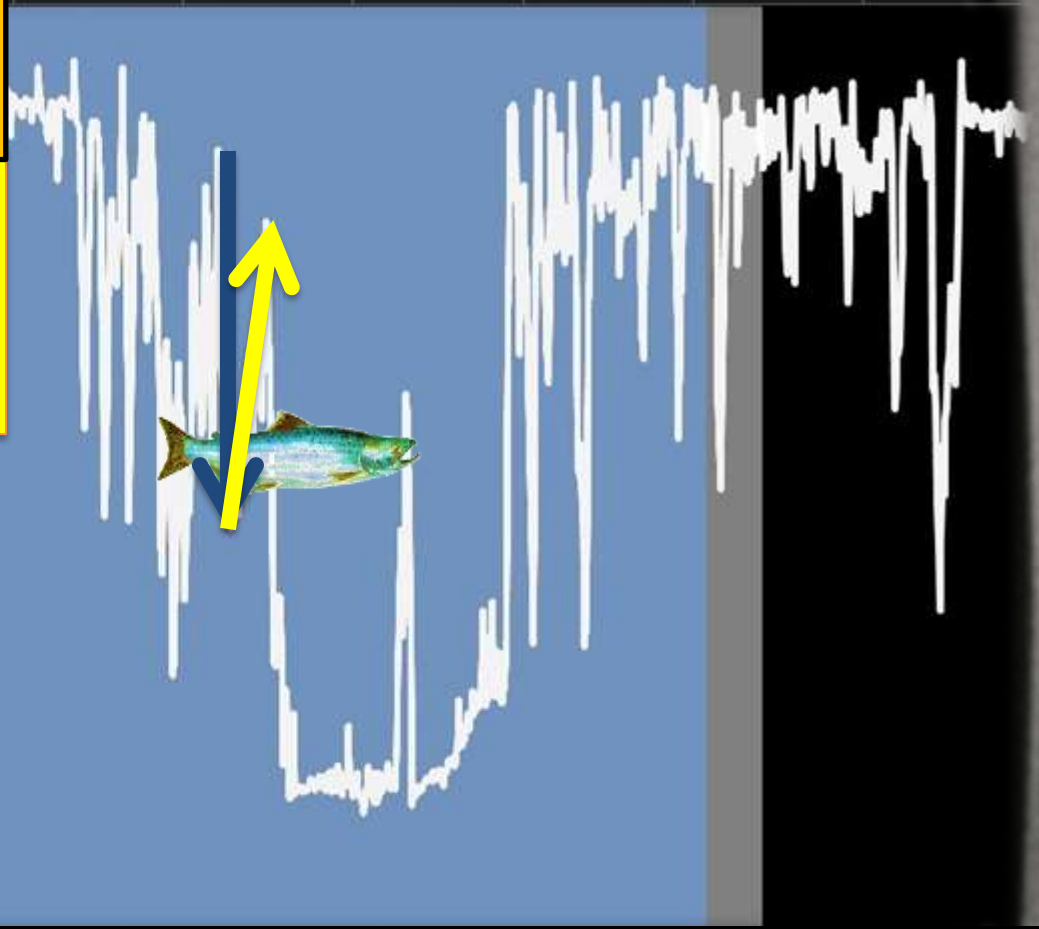
Down

75/10

Up

61/31

0
20
40
60
80
100
120
140
160
180



Depth
(feet)

Temperature
(°F)

Rate
(Feet/Minute)

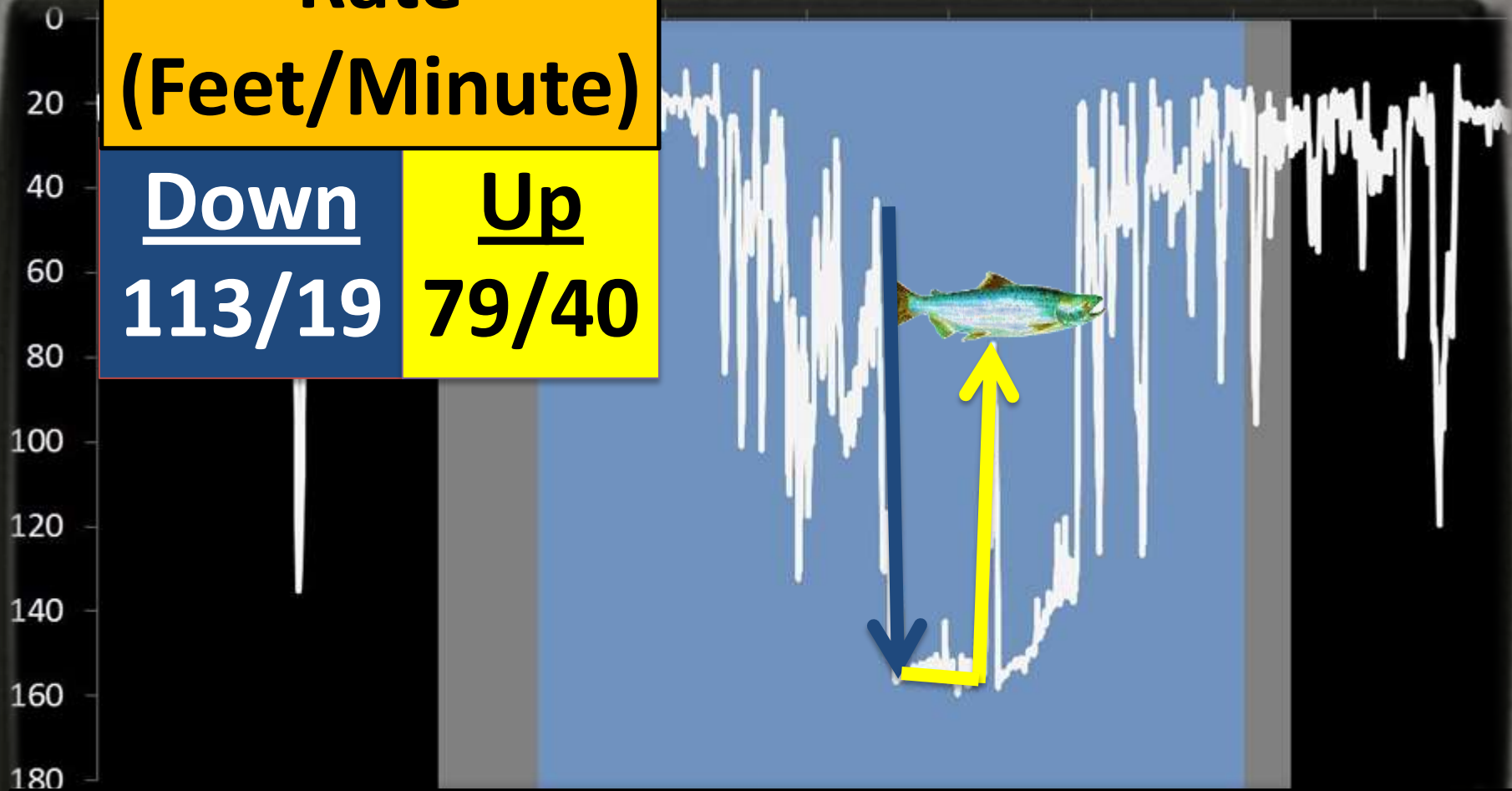
Time
(Minute)

Max
155.9
Min
12.40

Rate (Feet/Minute)

Down
113/19

Up
79/40



Depth
(feet)

Temperature
(°F)

Rate
(Feet/Minute)

Time
(Minute)

Max
155.9
Min
12.40

Rate (Feet/Minute)

Down

81/5

Up

137/27



20.83

Depth
(feet)

59.3

Temperature
(°F)

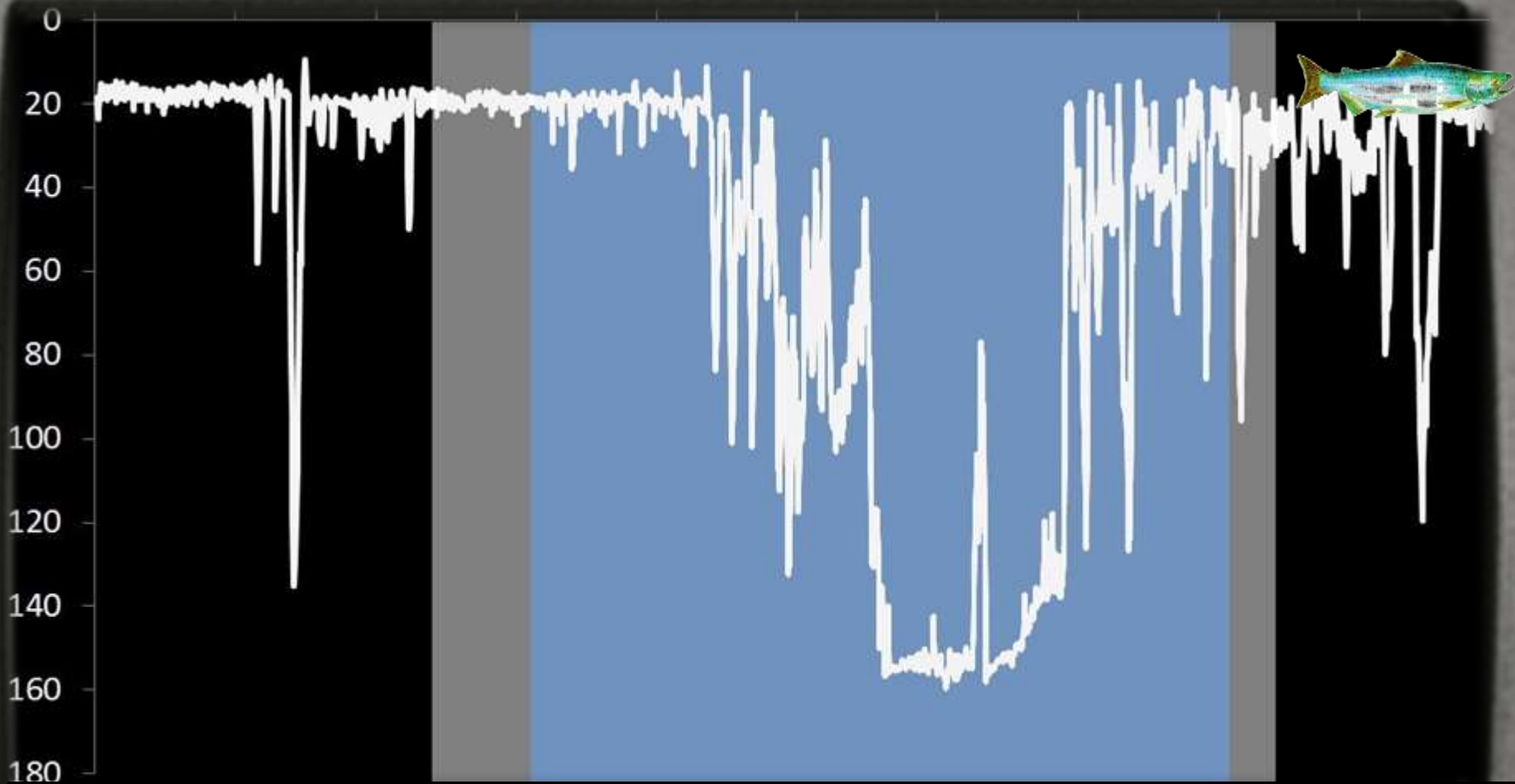
Rate
(Feet/Minute)

4:41 pm

Time
(Minute)

Max
155.9

Min
12.40

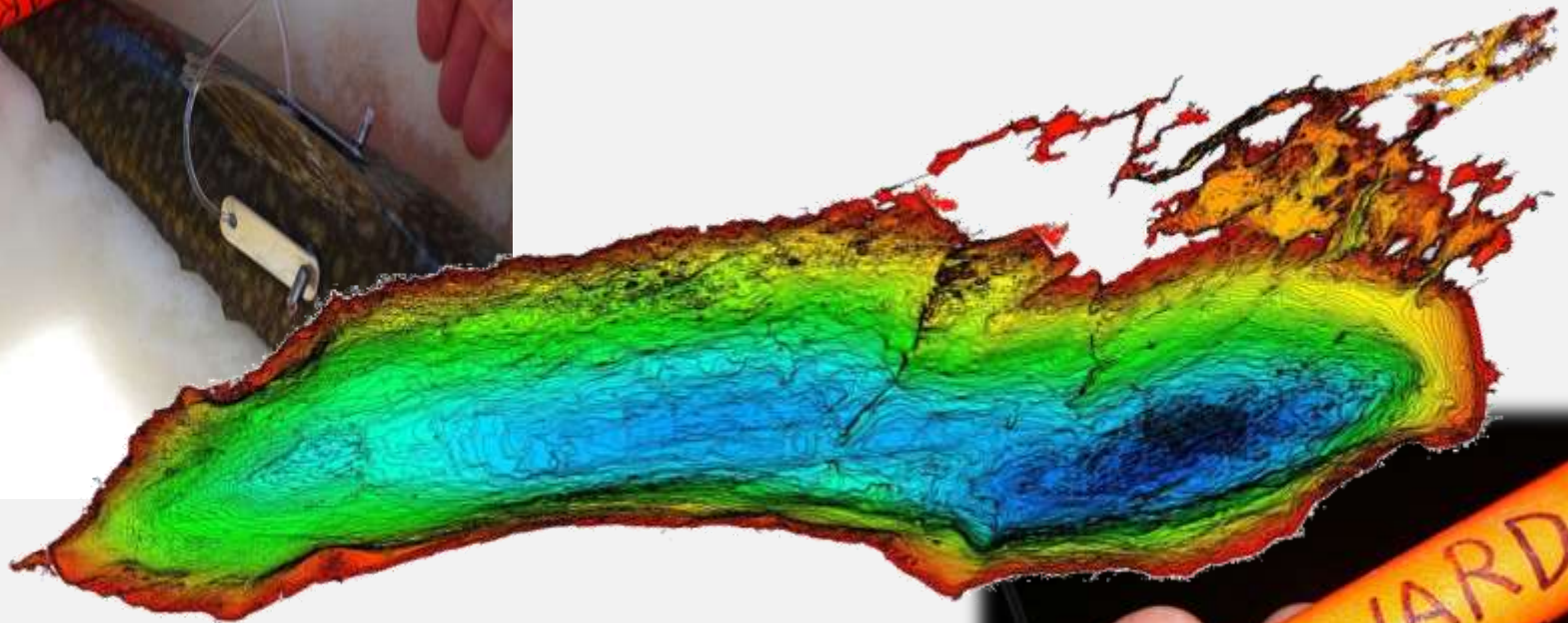
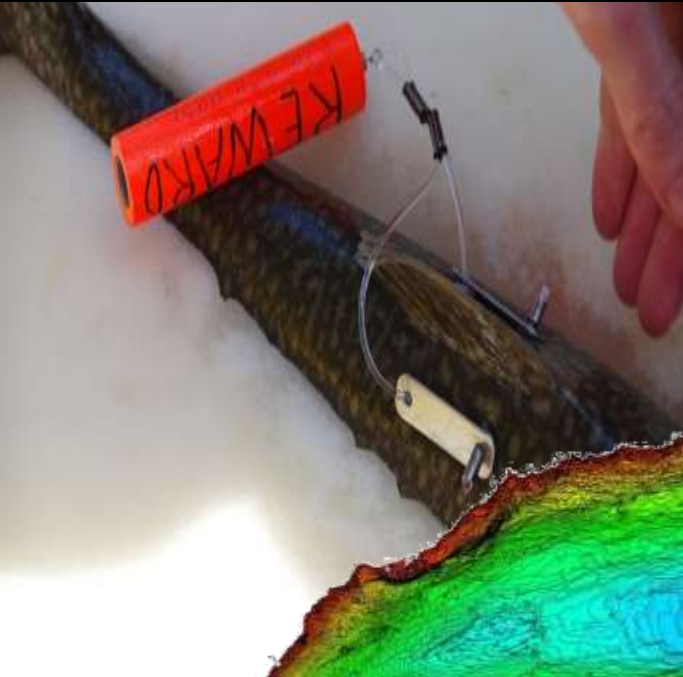


<p>11.19 Depth (feet)</p>	<p>59.7 Temperature (°F)</p>	<p>Rate (Feet/Minute)</p>	<p>10:59 pm Time (Minute)</p>	<p>Max 126.8</p> <hr/> <p>Min 11.19</p>
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What do we know so far?

- What is interesting?
 - Preliminary analysis reveals distinct habitats are selected by each species
 - Preliminary results also suggest that individual differences within a species are less than the differences between species
 - Rainbow Trout occupied a broad range of temperatures associated with regular movements between surface and deeper waters until the end of September
 - Chinook Salmon tended to occupy depths closer to the surface at night, and undergo dynamic movements to greater depths during the day

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