

<><> Time Stamp <><>

29/06/2022 - 01:19:02

<><> Data Summary <><>

Bore ID: GW036872.1.1

Bore Coordinates: (-30.923963, 153.044423)

Silo Grid Point Coordinates: (-30.9, 153.05)

<><> Code Checks <><>

GWL Date Chronological Order Check: No Error

SILo Date Chronological Order Check: No Error

<><> Model Functionality <><>

Input Variables (Daily):

SWL (m)

Input Time Lags: Current day + 29 proceeding days

Output: SWL (m) in 30 days time

Data Range: 02/04/2010 - 01/09/2021

<><> Hyperparameters <><>

Number of Epochs: 1000

Learning Rate: 0.001

Number of Features in Hidden State: 2

Number of Staked LSTM Layers: 1

Number of Output Classes: 1

Percentage of Data for Training: 80.0%

<><> Model Results <><>

Run Time: 62.73074817657471s

Network Structure:

(lstm): LSTM(1, 2, batch\_first=True)

(fc\_1): Linear(in\_features=2, out\_features=128, bias=True)

(fc): Linear(in\_features=128, out\_features=1, bias=True)

(relu): ReLU()

Final Training Loss: 0.004047642461955547

Training Set RMSE: 0.09924891085706393

Testing Set RMSE: 0.18436093662778677

Epoch: 0, Loss: 0.55159

Epoch: 100, Loss: 0.02190

Epoch: 200, Loss: 0.02146

Epoch: 300, Loss: 0.02075

Epoch: 400, Loss: 0.01865

Epoch: 500, Loss: 0.01142

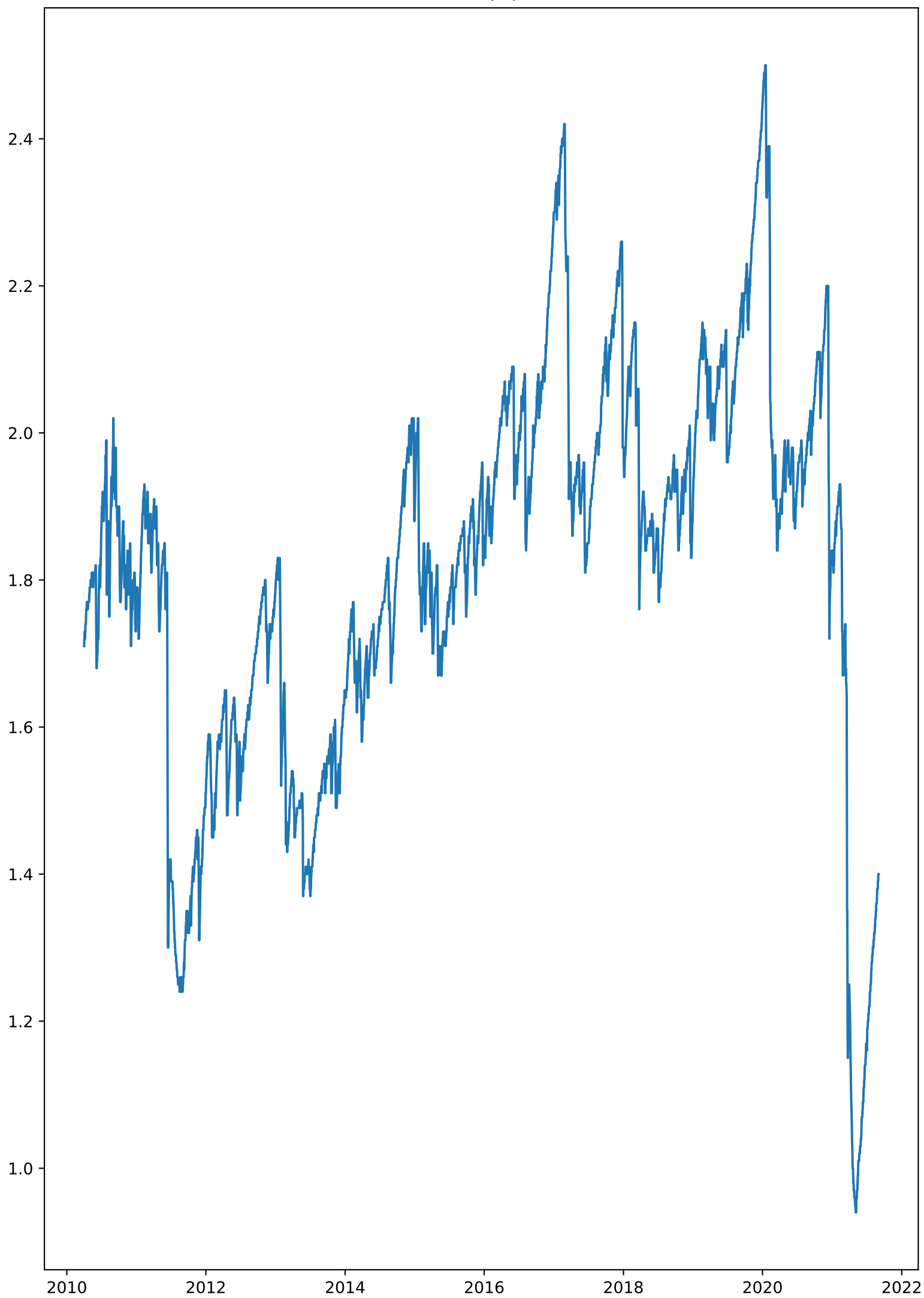
Epoch: 600, Loss: 0.00468

Epoch: 700, Loss: 0.00408

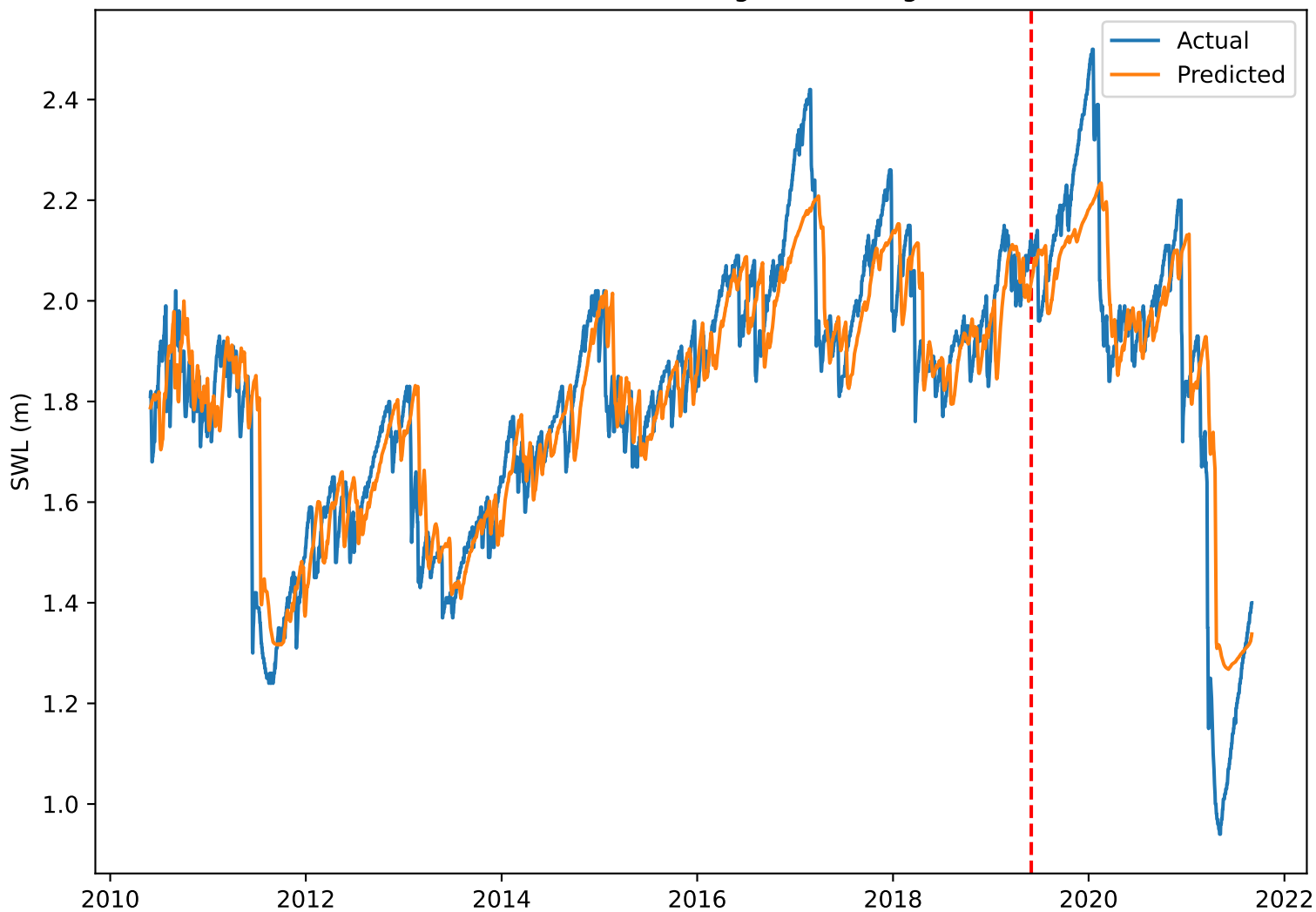
Epoch: 800, Loss: 0.00405

Epoch: 900, Loss: 0.00405

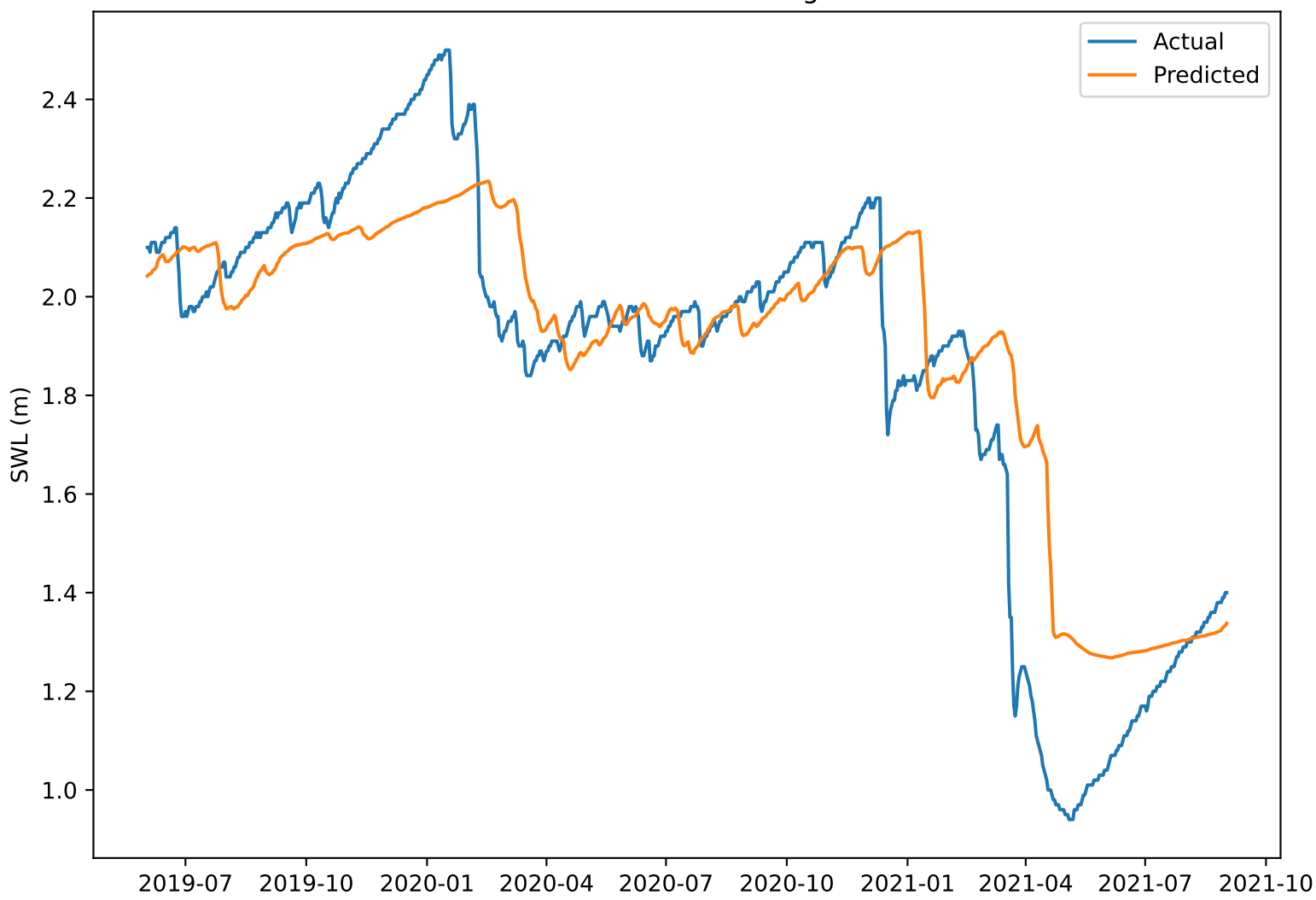
SWL (m)



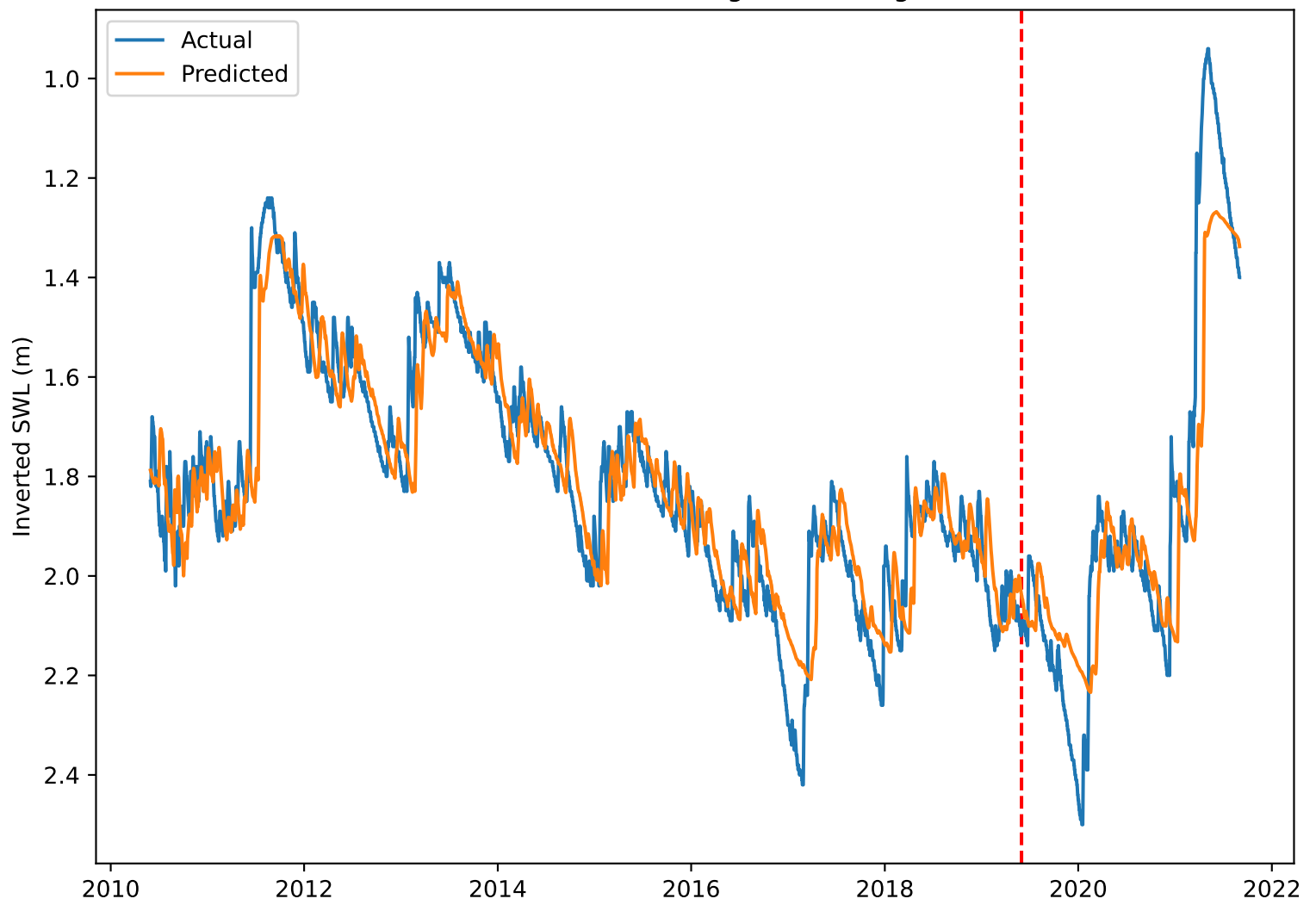
GW036872.1.1: Training and Testing Sets



GW036872.1.1: Testing Set



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GW036872.1.1: Testing Set

