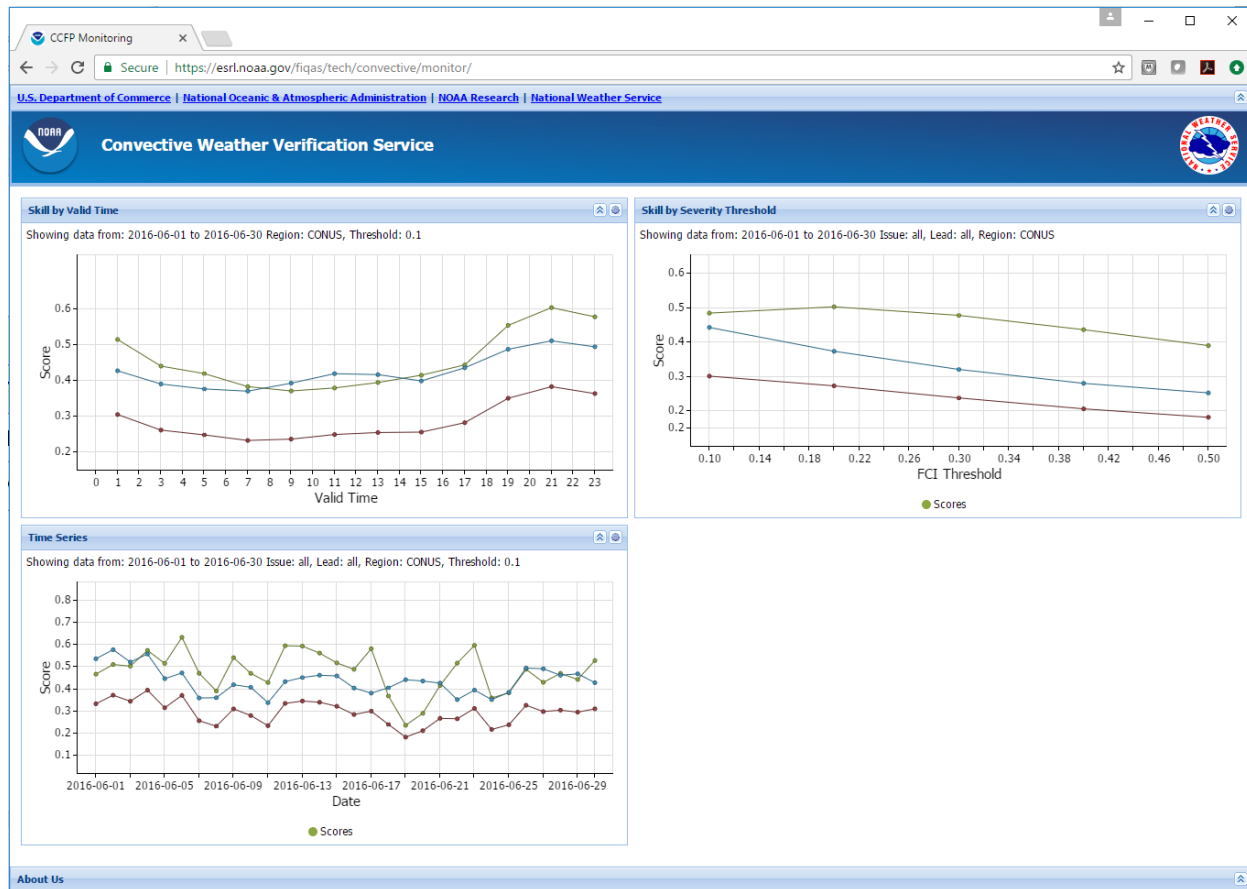


TCF Verification Metrics

Mar 1 - Sep 30, 2017

Kevin Stone
National Weather Service

TCF Metrics from Convective Weather Verification Service



Developed by
Global Systems Division
at
**NOAA's Earth System
Research Laboratory**

Verification Scores

Contingency table depicting counts used in verification statistics for dichotomous (e.g., Yes/No) forecasts and observations

Forecast	Observed	
	Yes	No
Yes	Hit (YY)	False Alarm (YN)
No	Miss (NY)	Correct Rejection (NN)

Probability of Detection (POD) = Hits/(Hits+Misses)

Range 0 to 1, perfect score = 1

Success Rate = 1-FAR

where False Alarm Ratio (FAR) = False Alarms/(Hits+False Alarms)

Range 0 to 1, perfect score = 1

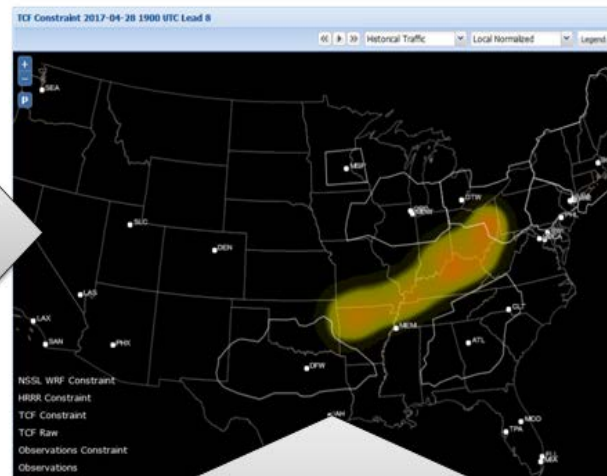
Critical Success Index (CSI) = Hits/(Hits+Misses+False Alarms)

Range 0 to 1, perfect score = 1

Verification Process



FCI



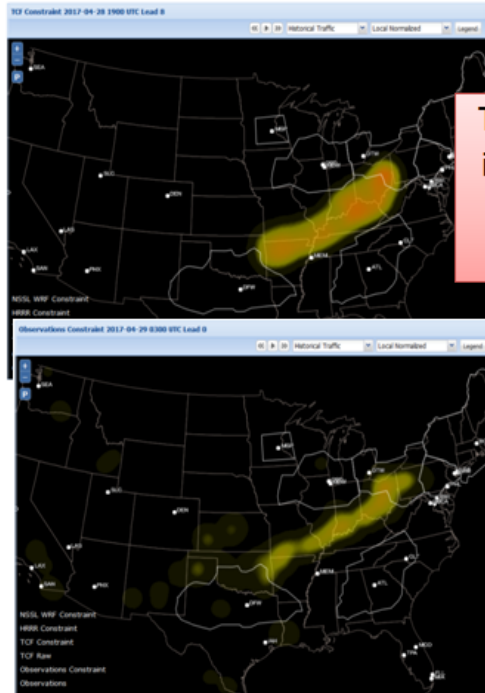
Verification
Happens



FCI



Verification Process (cont'd)

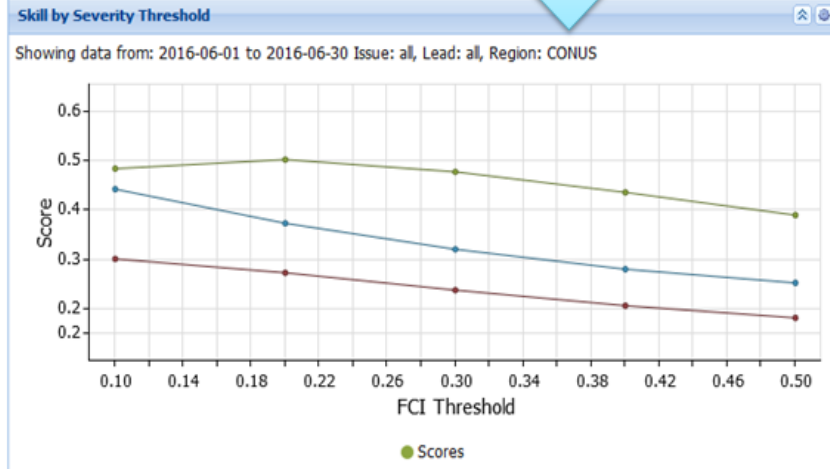


Threshold
into "yes"
and "no"
events

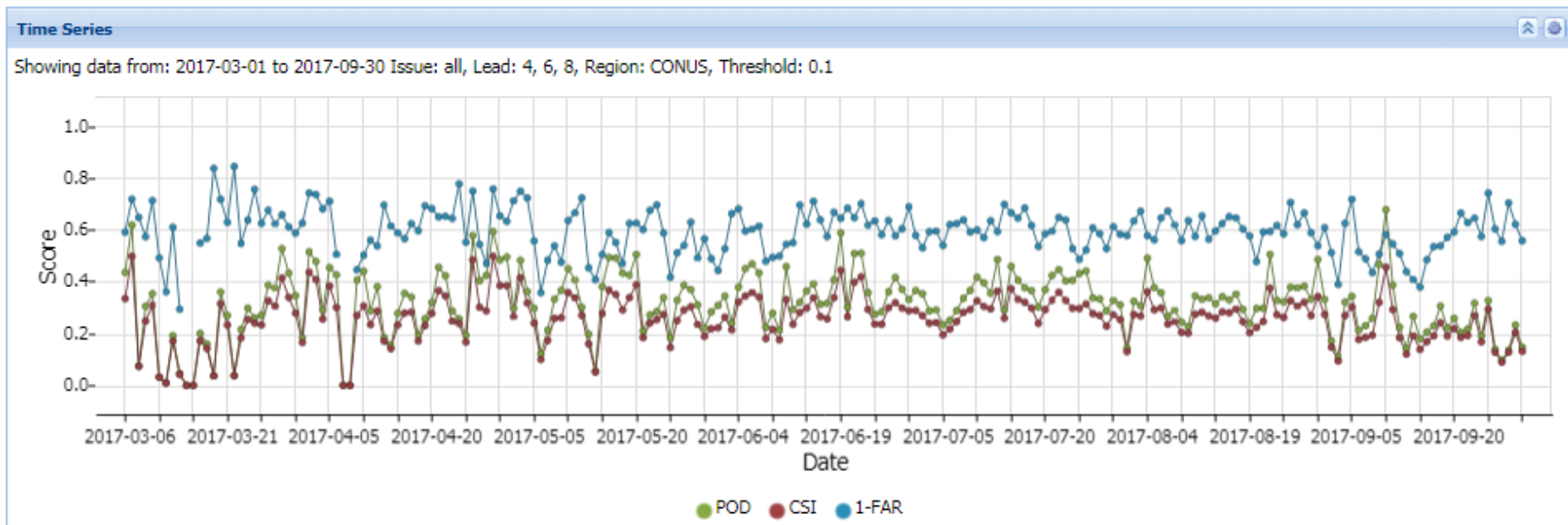
FCI range is 0 – 1
Thresholds 0.1,
0.2, 0.3, 0.4, 0.5

Contingency Table

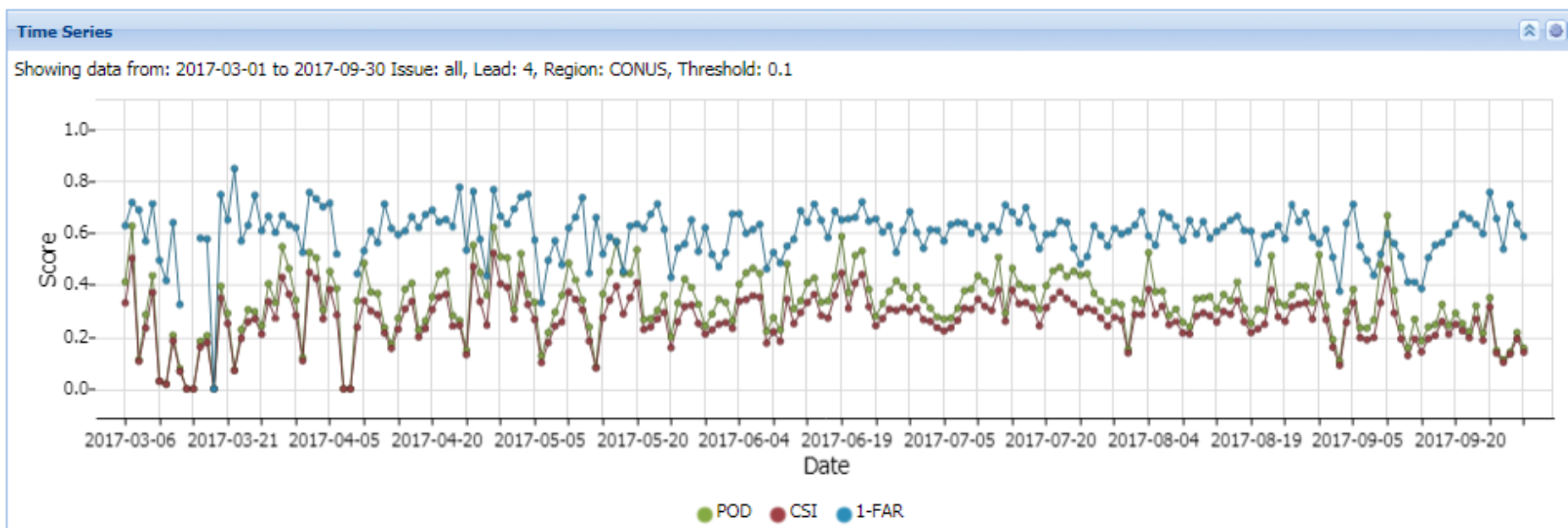
		Obs	
		Yes	No
Forecast	Yes	Hits	False Alarms
	No	Misses	Correct Negatives



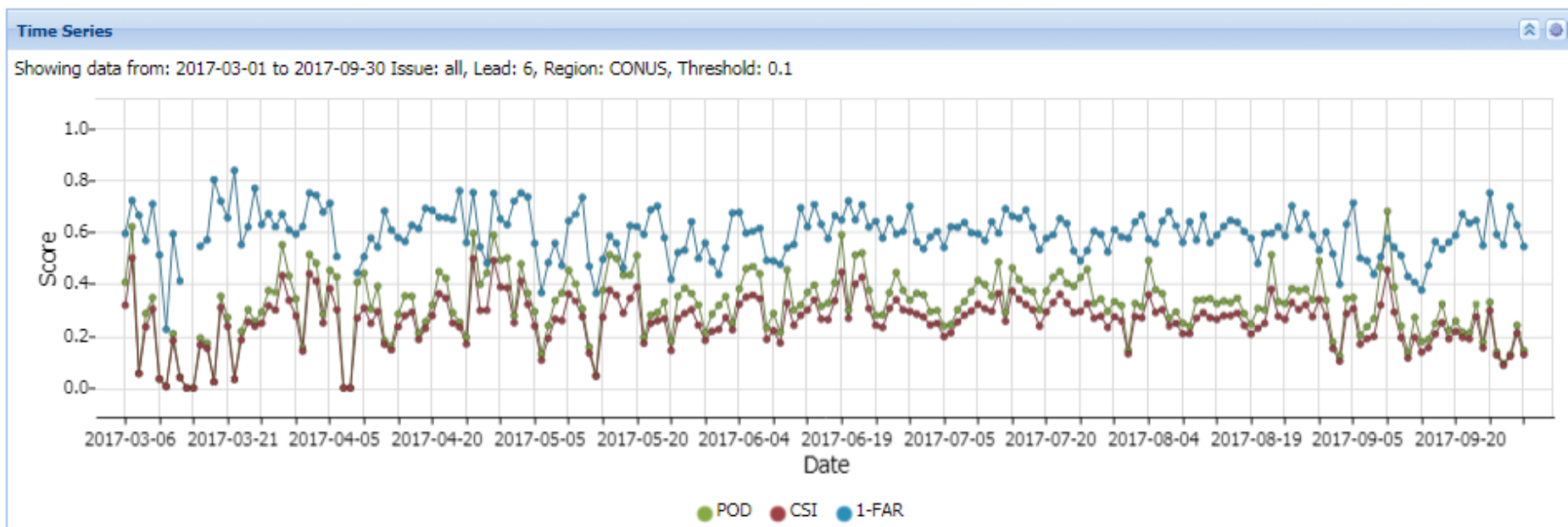
TCF All Hours Skill Time Series (Mar 1 - Sep 30, 2017)



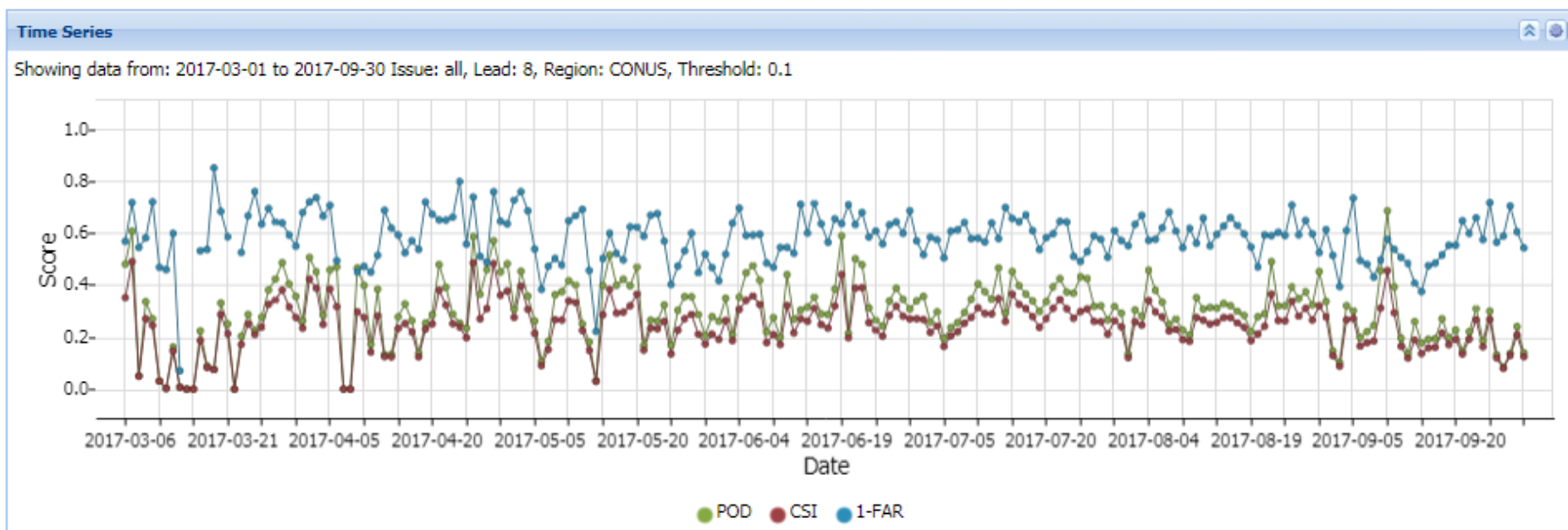
TCF 4 Hr Skill Time Series (Mar 1 - Sep 30, 2017)



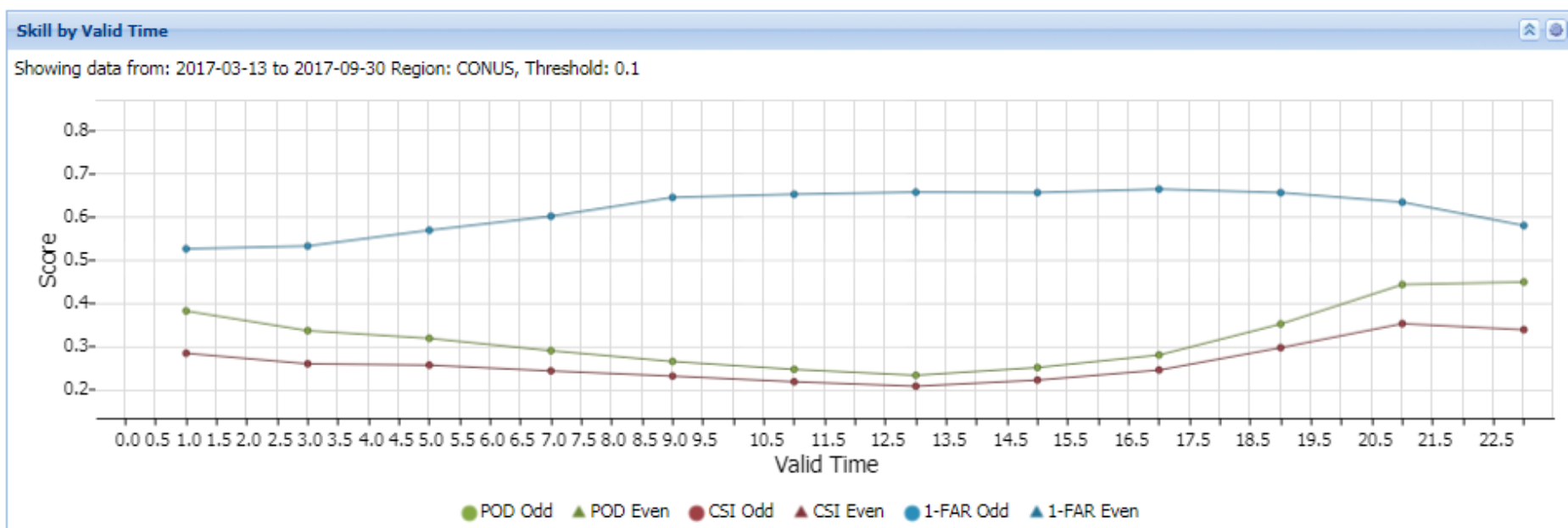
TCF 6 Hr Skill Time Series (Mar 1 - Sep 30, 2017)



TCF 8 Hr Skill Time Series (Mar 1 - Sep 30, 2017)



TCF Skill by GMT Valid Time (Mar-Sep 2017)

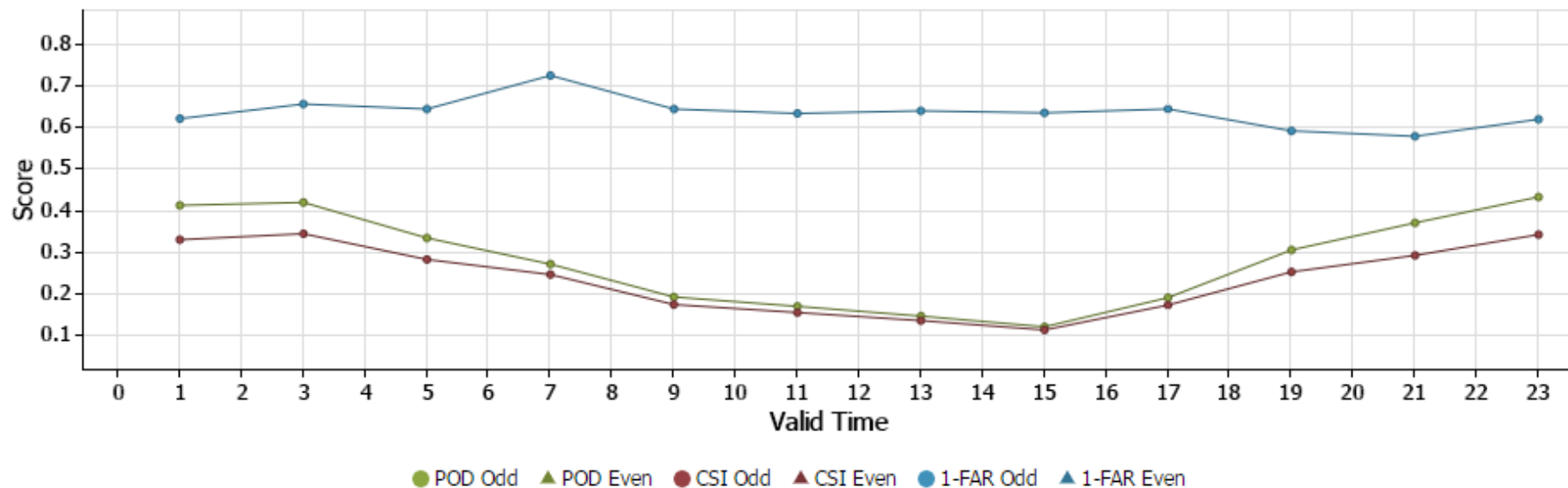


TCF Skill by GMT Valid Time (March 2017)

Skill by Valid Time



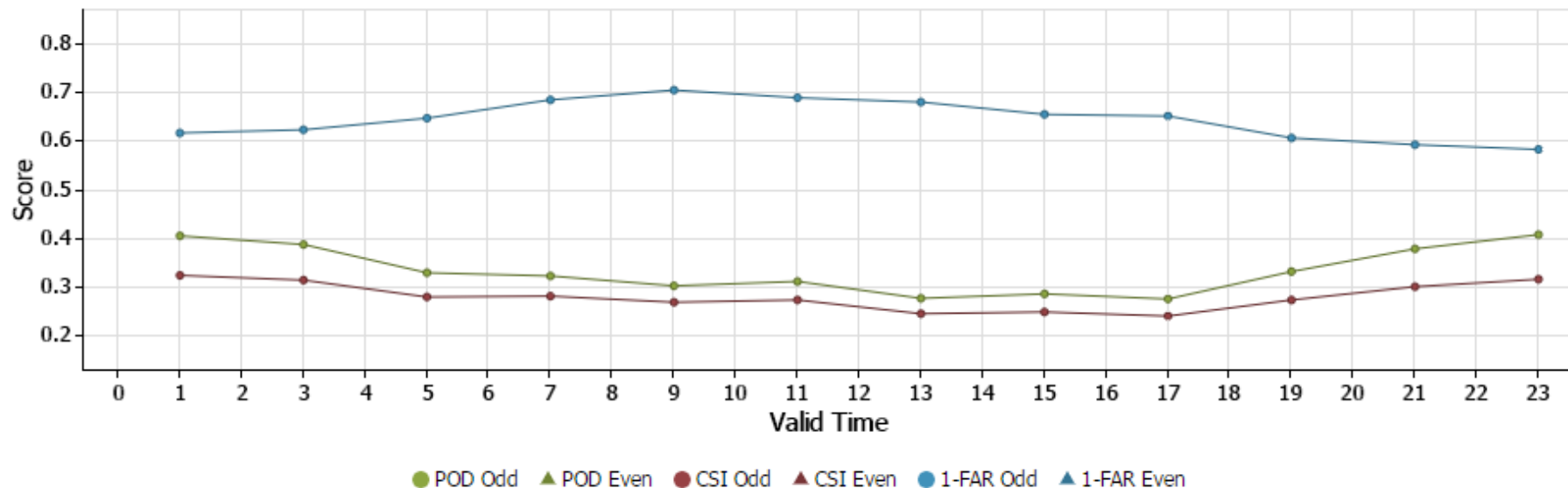
Showing data from: 2017-03-13 to 2017-03-31 Region: CONUS, Threshold: 0.1



TCF Skill by GMT Valid Time (April 2017)

Skill by Valid Time

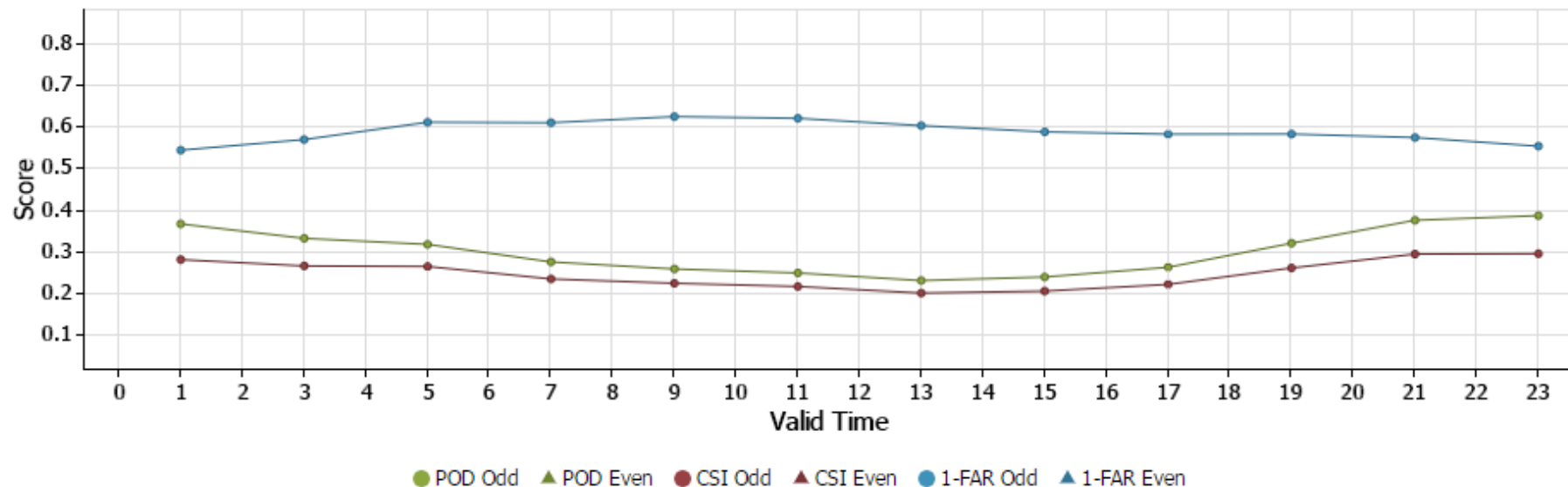
Showing data from: 2017-04-01 to 2017-04-30 Region: CONUS, Threshold: 0.1



TCF Skill by GMT Valid Time (May 2017)

Skill by Valid Time

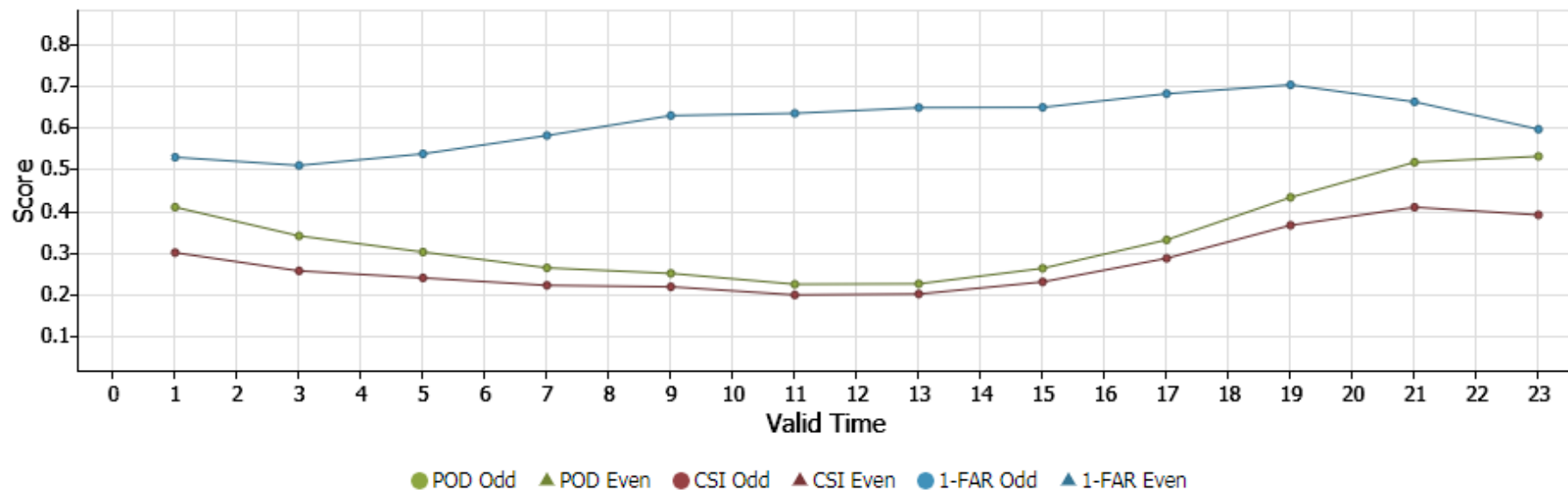
Showing data from: 2017-05-01 to 2017-05-31 Region: CONUS, Threshold: 0.1



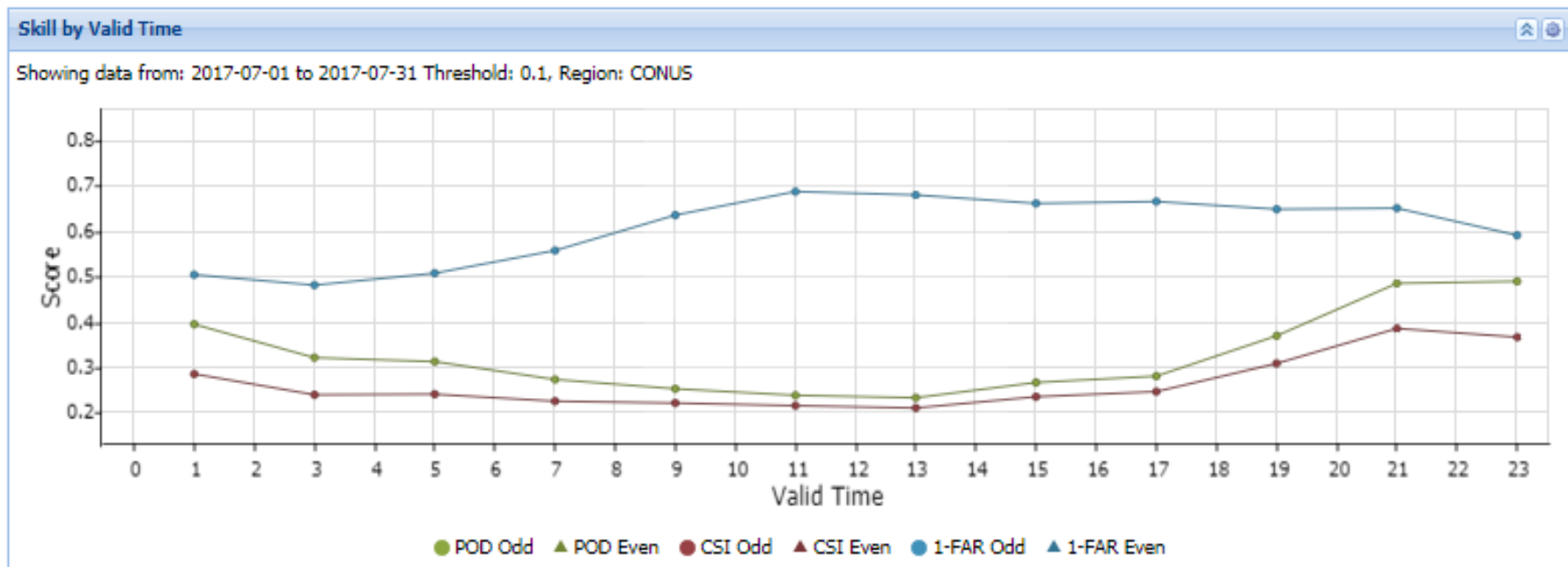
TCF Skill by GMT Valid Time (Jun 2017)

Skill by Valid Time

Showing data from: 2017-06-01 to 2017-06-30 Region: CONUS, Threshold: 0.1



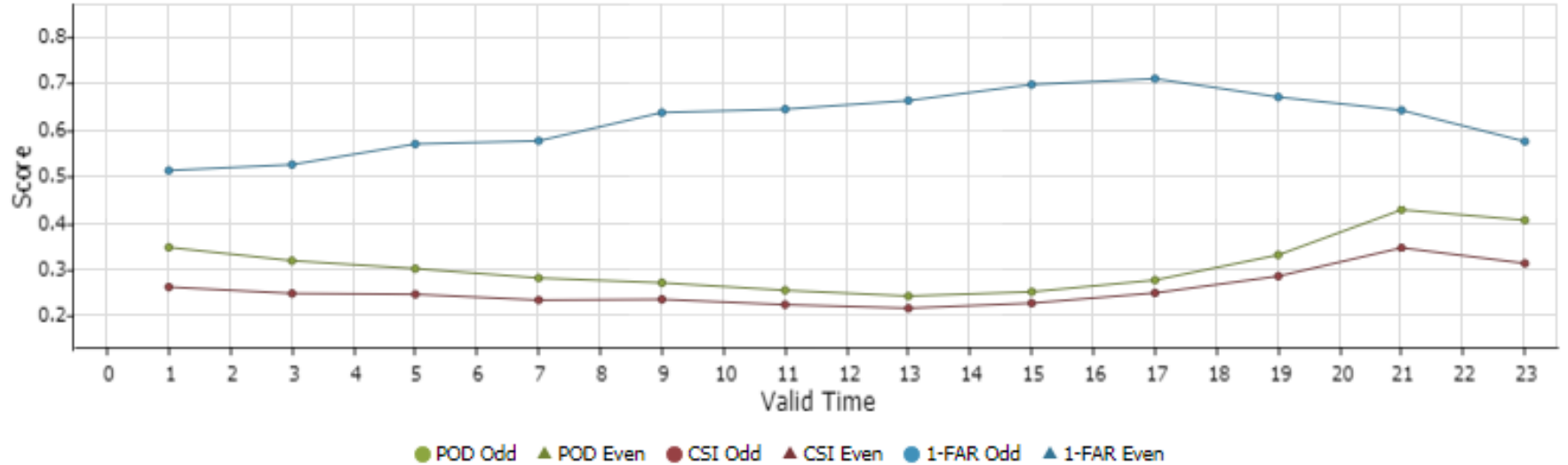
TCF Skill by GMT Valid Time (Jul 2017)



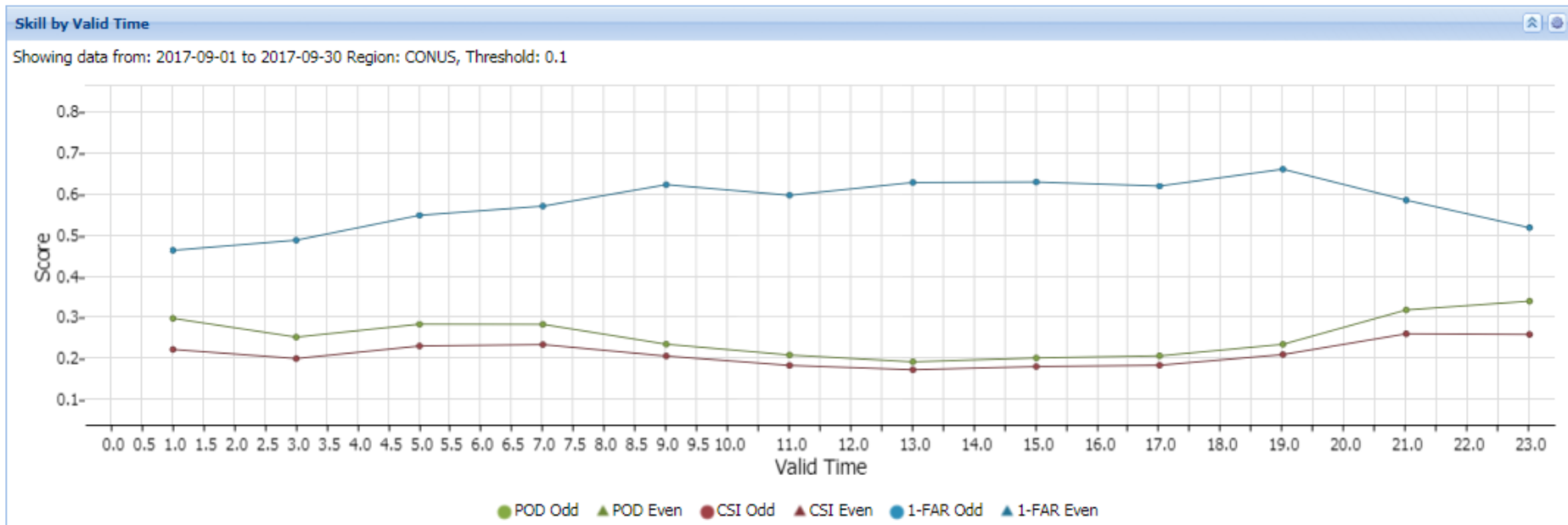
TCF Skill by GMT Valid Time (Aug 2017)

Skill by Valid Time

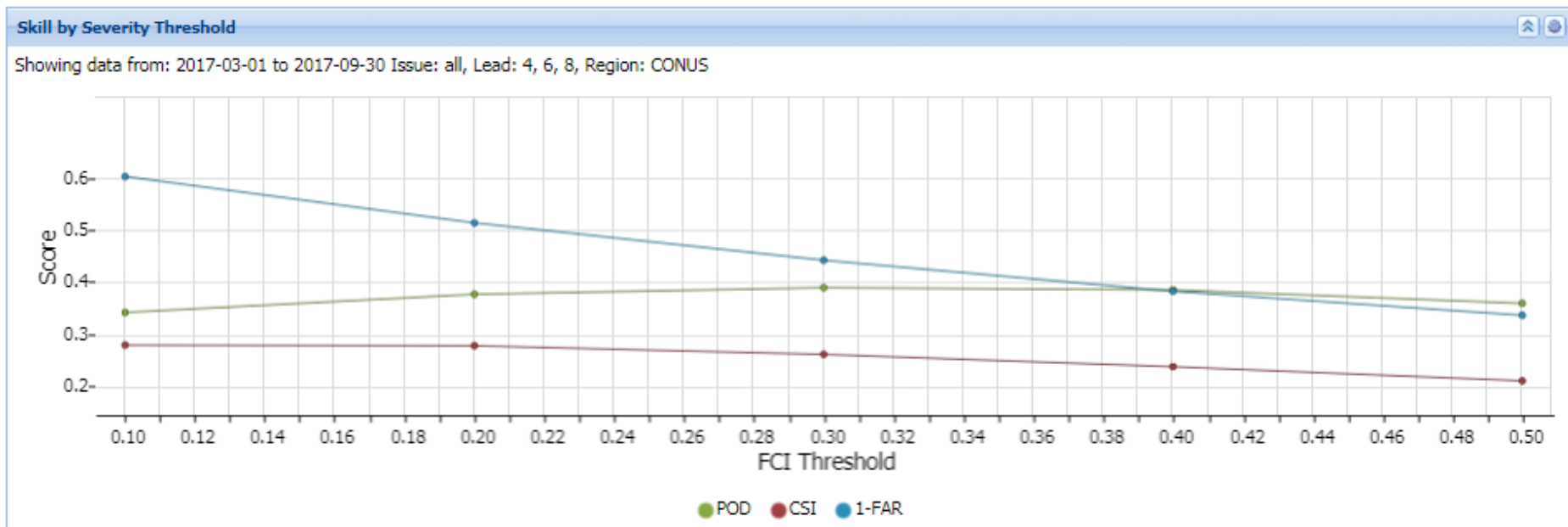
Showing data from: 2017-08-01 to 2017-08-31 Threshold: 0.1, Region: CONUS



TCF Skill by GMT Valid Time (Sep 2017)



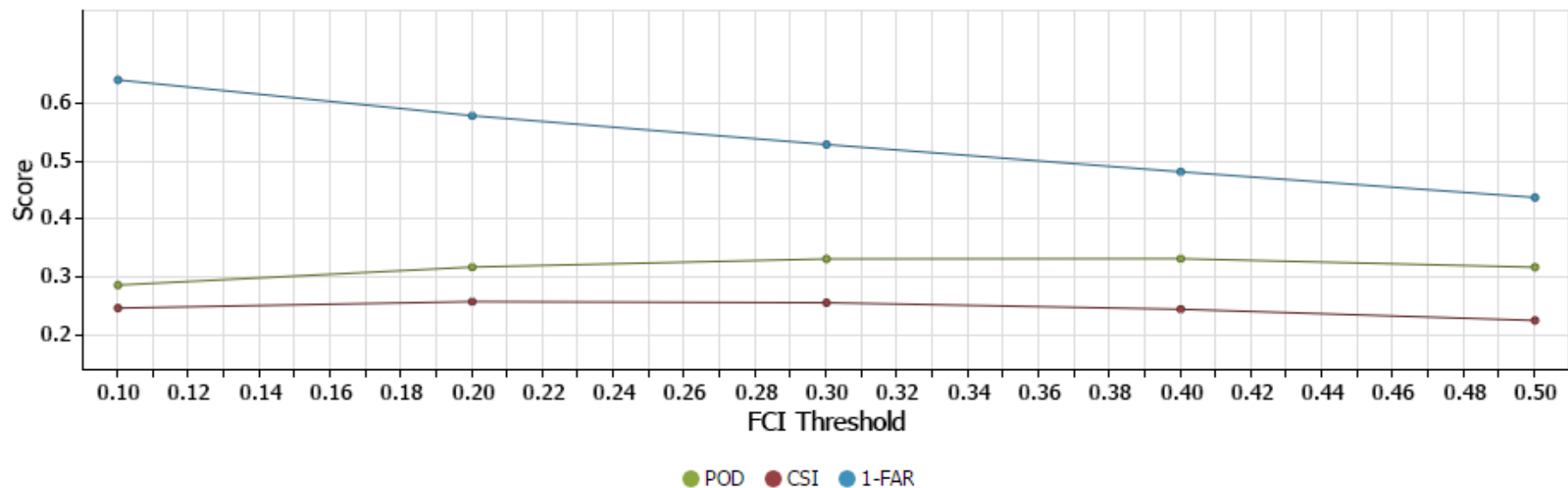
TCF Skill by FCI Threshold (Mar-Sep 2017)



TCF Skill by FCI Threshold (Mar 2017)

Skill by Severity Threshold

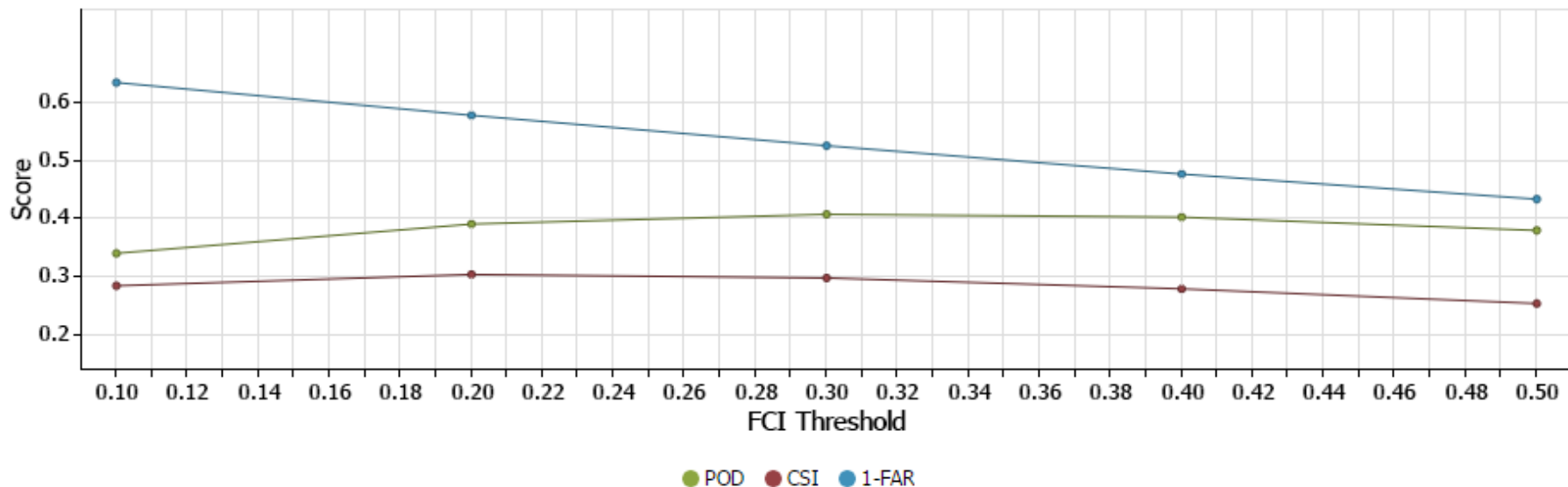
Showing data from: 2017-03-01 to 2017-03-31 Issue: all, Lead: 4, 6, 8, Region: CONUS



TCF Skill by FCI Threshold (Apr 2017)

Skill by Severity Threshold

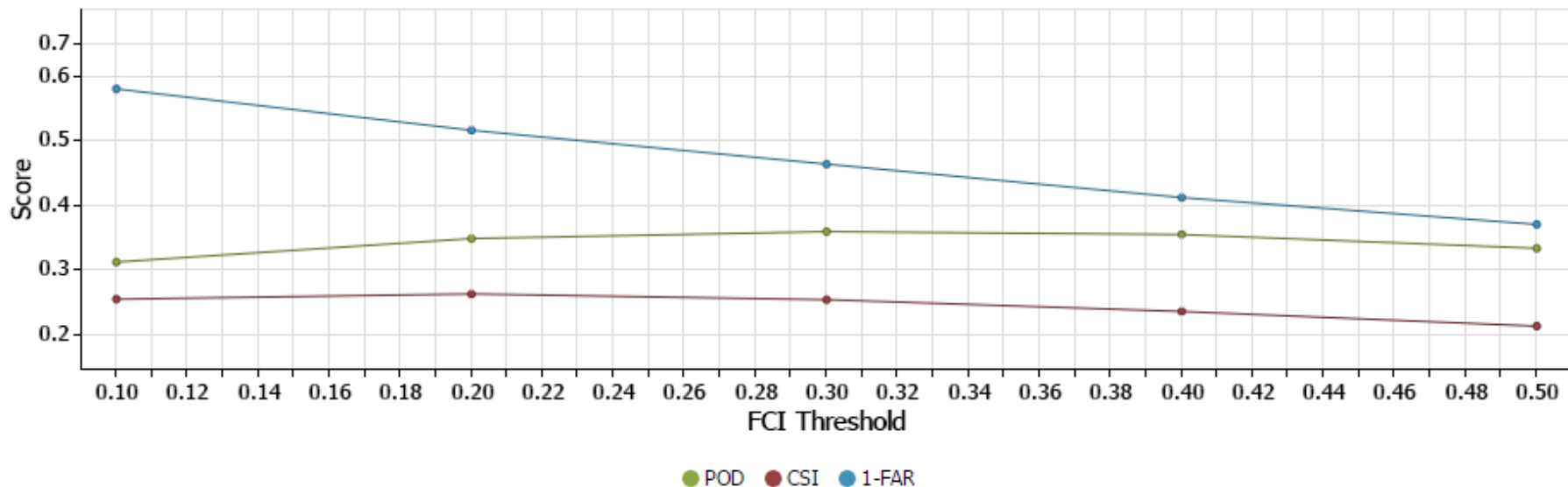
Showing data from: 2017-04-01 to 2017-04-30 Issue: all, Lead: 4, 6, 8, Region: CONUS



TCF Skill by FCI Threshold (May 2017)

Skill by Severity Threshold

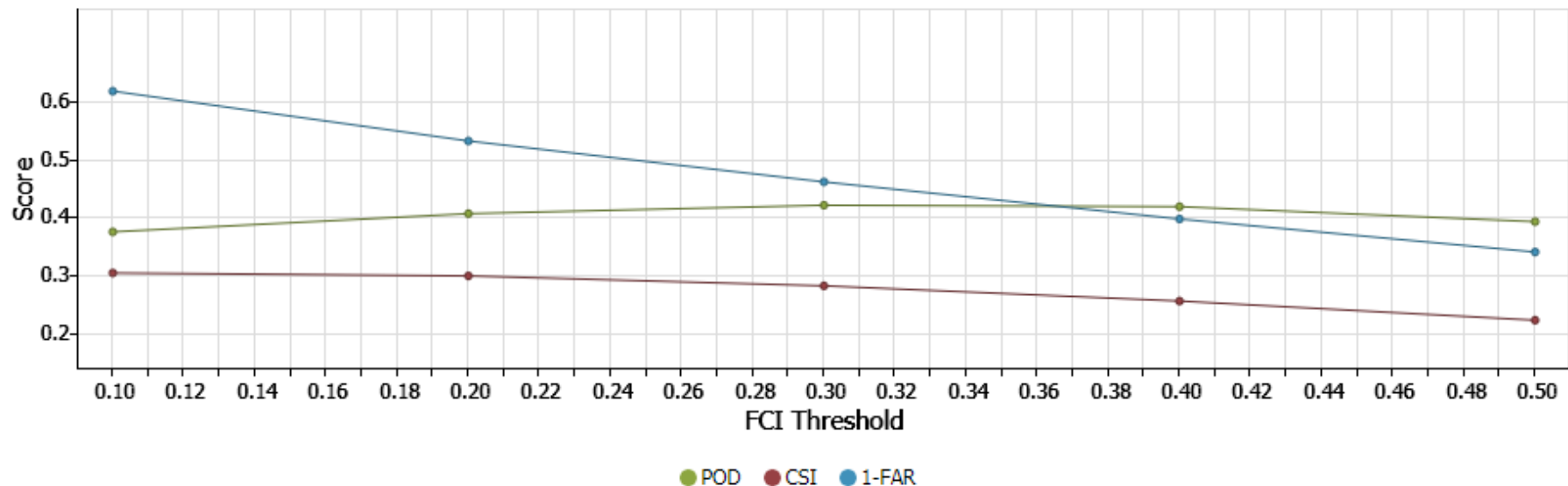
Showing data from: 2017-05-01 to 2017-05-31 Issue: all, Lead: 4, 6, 8, Region: CONUS



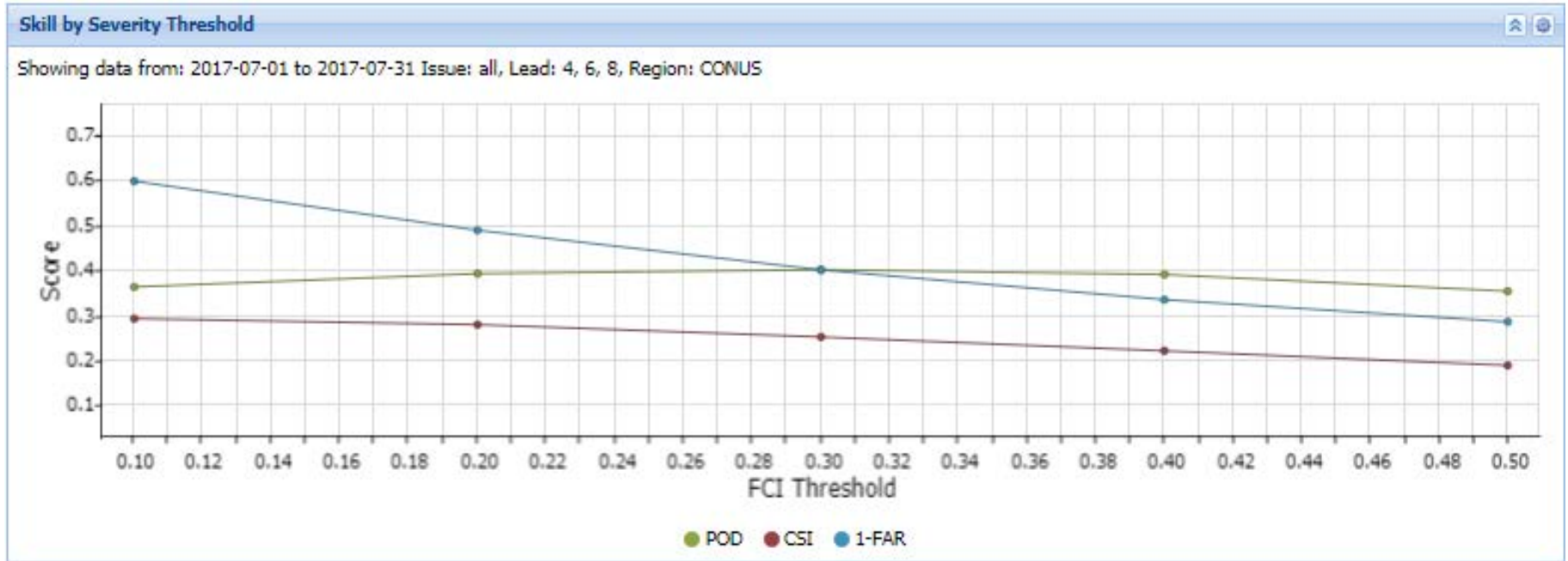
TCF Skill by FCI Threshold (Jun 2017)

Skill by Severity Threshold

Showing data from: 2017-06-01 to 2017-06-30 Issue: all, Lead: 4, 6, 8, Region: CONUS



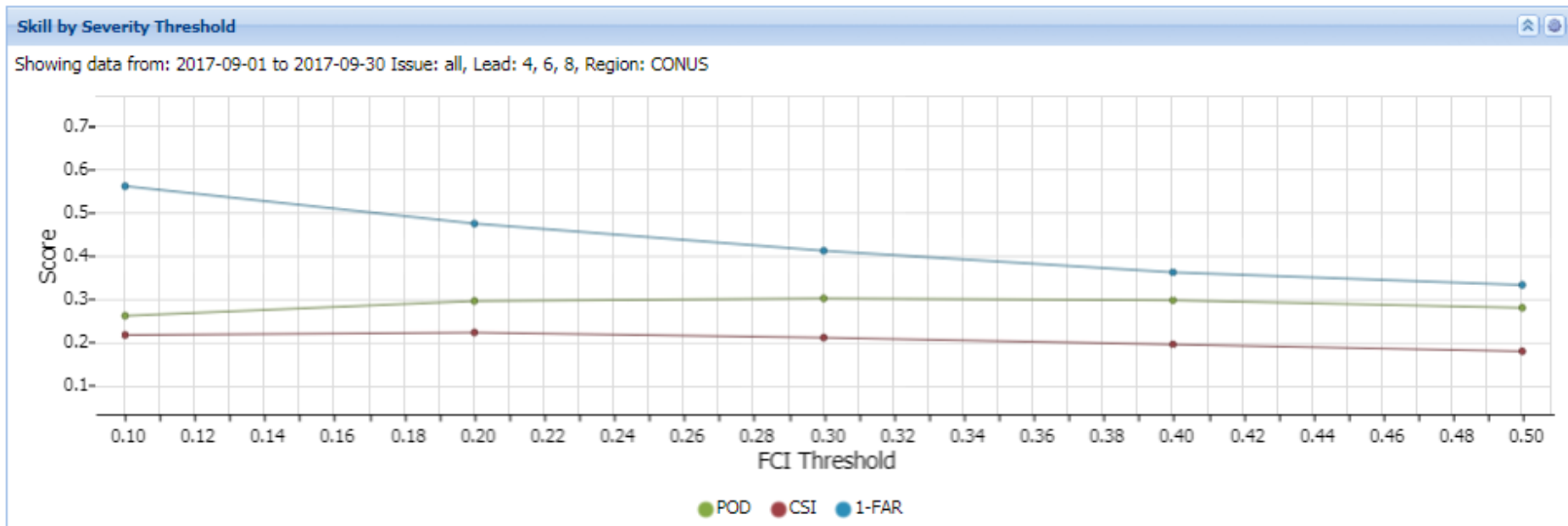
TCF Skill by FCI Threshold (Jul 2017)



TCF Skill by FCI Threshold (Aug 2017)



TCF Skill by FCI Threshold (Sep 2017)



Contact Info

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