

# **WSDOT**

# **Scour Workshop**

## **Module 2**

## **Scour Definitions**

**May 30<sup>th</sup>, 2023**

# Luke Assink

## Hydraulic and Floodplain Design Manager

HQ Development Division

WSDOT



### Current Duties

- Oversee scour and floodplain designs statewide
- Oversee fish passage projects in Southwest, South Central, North Central, and Eastern Regions
- Help with policy updates and training
- Assist Eastern Washington with stormwater management, and drainage materials



### Background and Experience

- 16 total years at WSDOT
  - 10 years in South Central Region
  - 6 years in HQ Hydraulics



### Education

- B.S. Civil Engineering (WSU)



### Personal Interests

- Reading
- Video games
- Amateur poultryman
- Traveling

# Overview

- Scour Design Flood
- Scour Check Flood
- Lateral Migration
- Total Scour

# Scour Design Flood

The discharge associated with the 1 percent annual exceedance probability flood or the 2080 100-year projected flood, whichever is greater (WSDOT Hydraulics Manual)



Activate Windows

Image Source: USDOT

# Scour Check Flood

The discharge associated with the 0.2 percent annual exceedance probability flood or the 2080 100-year projected flood, whichever is greater (WSDOT Hydraulics Manual)



*Image Source: Creative Commons*

# Lateral Migration

Lateral movement of a stream's position over time that occurs when the bank material or protections resisting forces are less than the stream's driving forces.

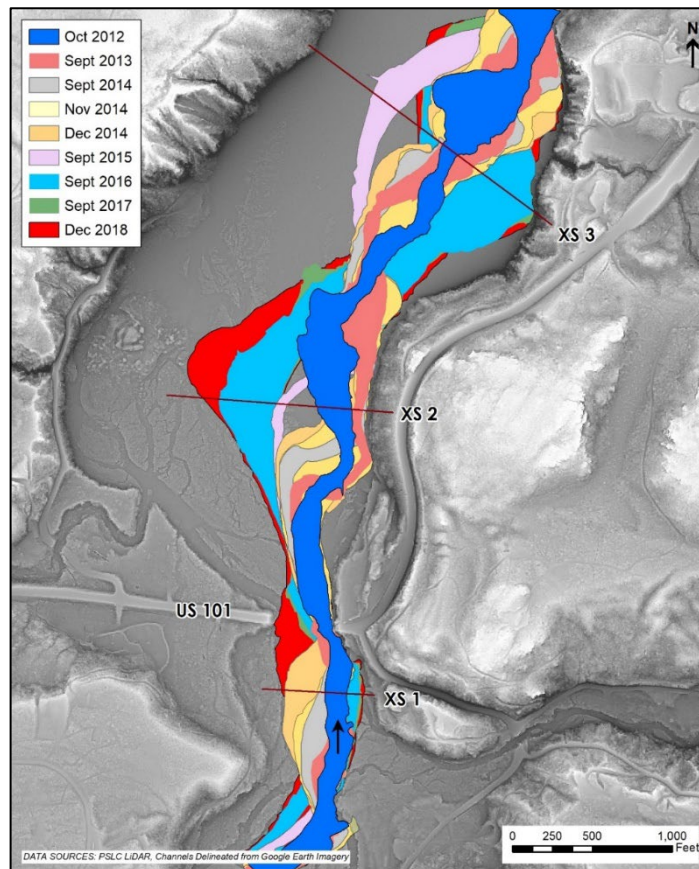


Image Source: Casey Kramer

# Total Scour

The sum of long-term degradation, contraction scour, and local scour. Total scour should be evaluated for all flows up to and including the scour design flood and scour check flood that create the worst-case total scour for the scour design flood and scour check flood (WSDOT Hydraulics Manual)

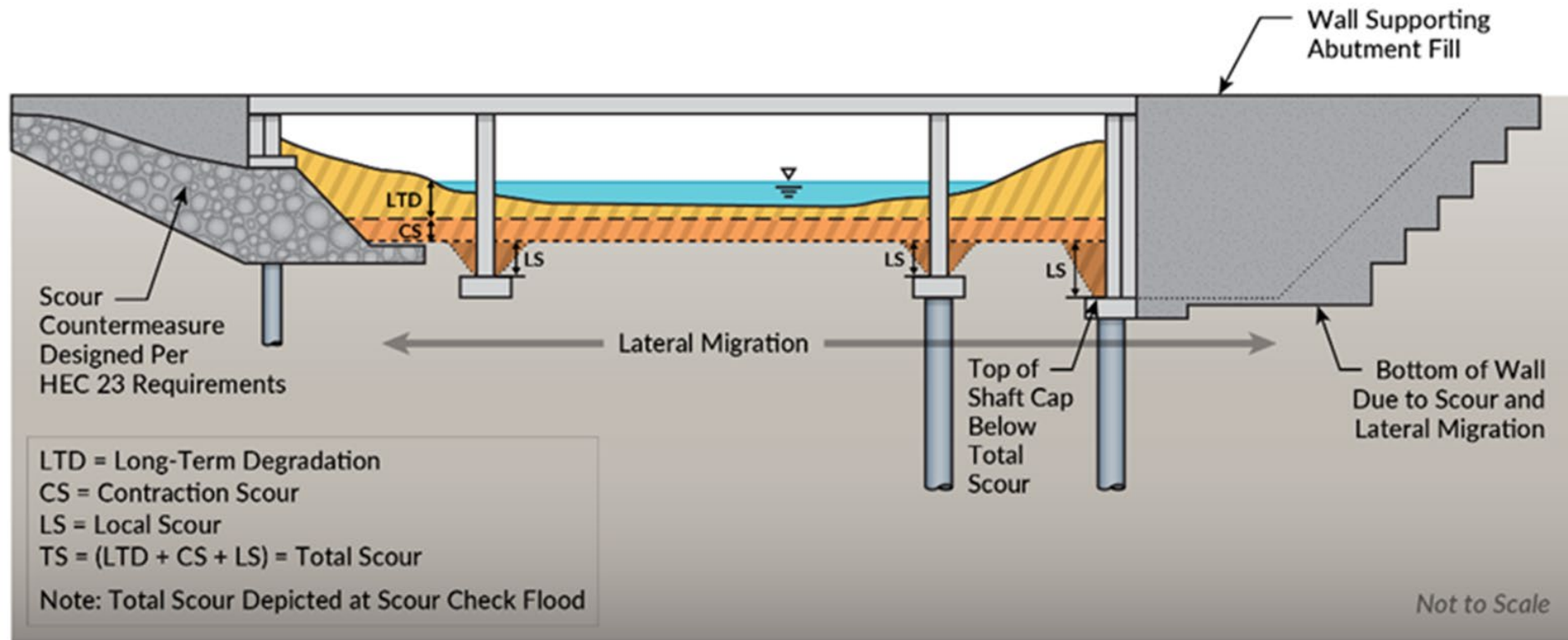


Image Source: WSDOT

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