



SF Tieton Fish Passage - Waterfalls, Landslides and Base Level Rise

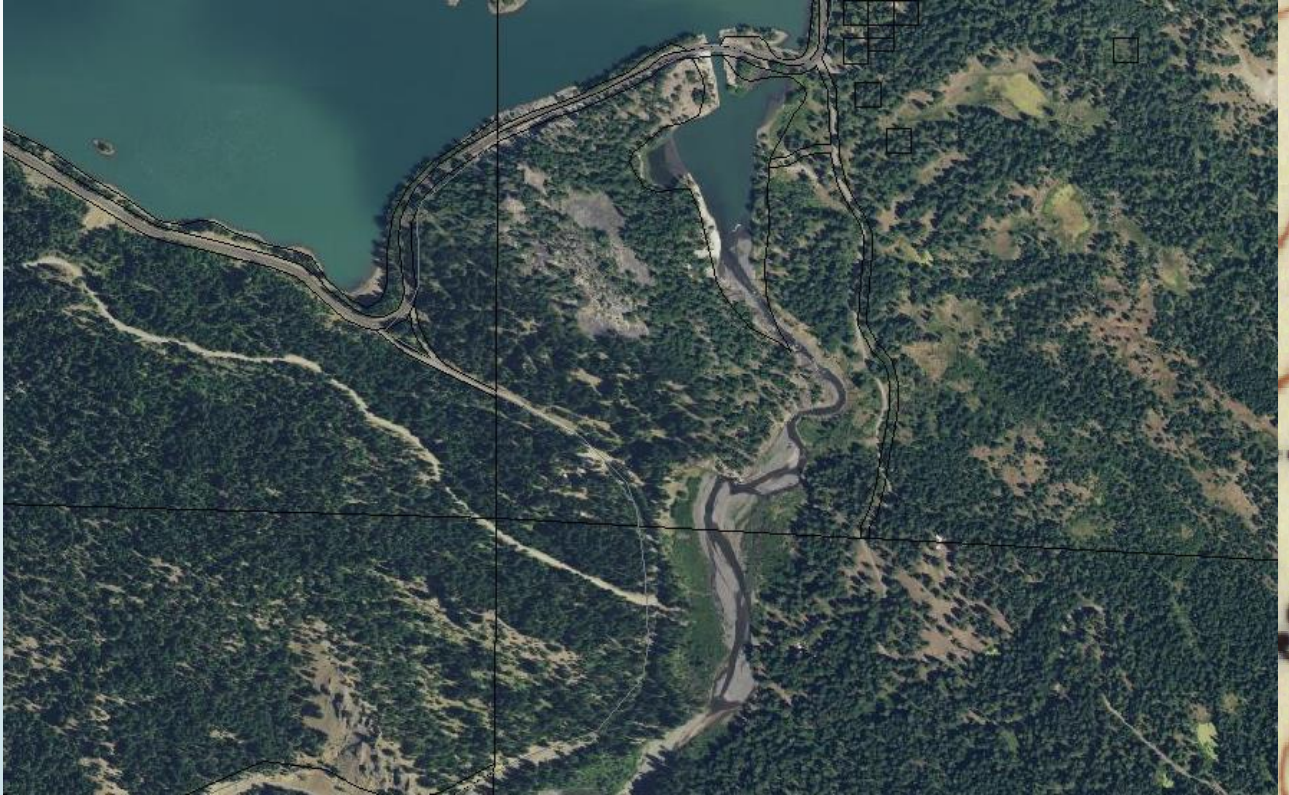
YBSMC

June 14, 2017

1907 McAllister Meadows



Close Up

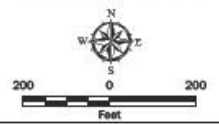






Legend

- Alignment 1 - Existing Channel
- Alignment 2 - Historic Channel
- Alignment 3 - Modified Historic Channel



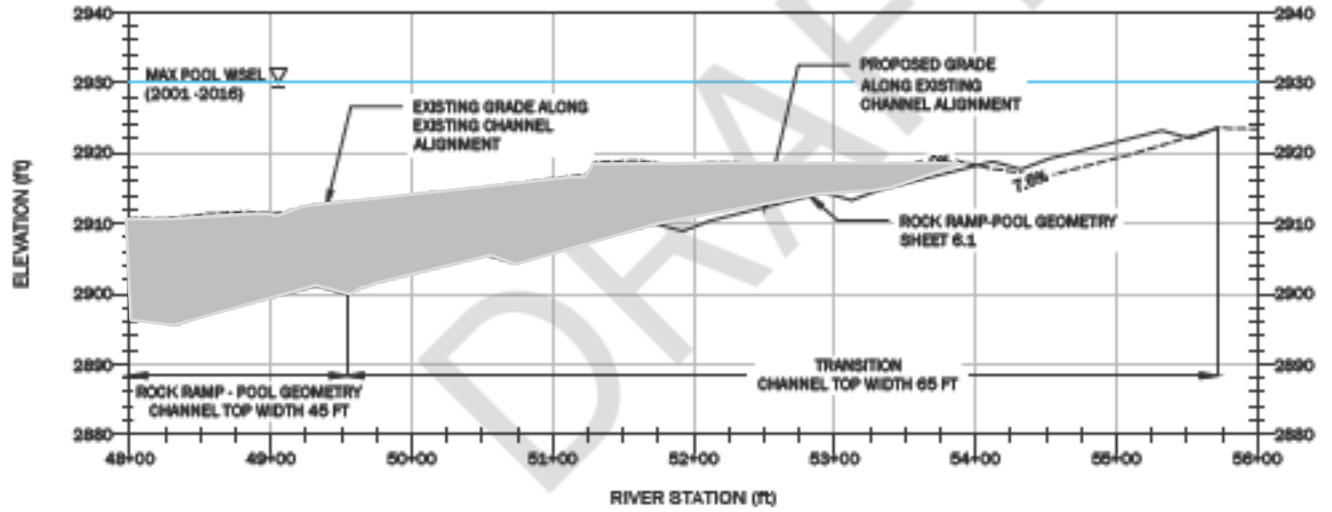
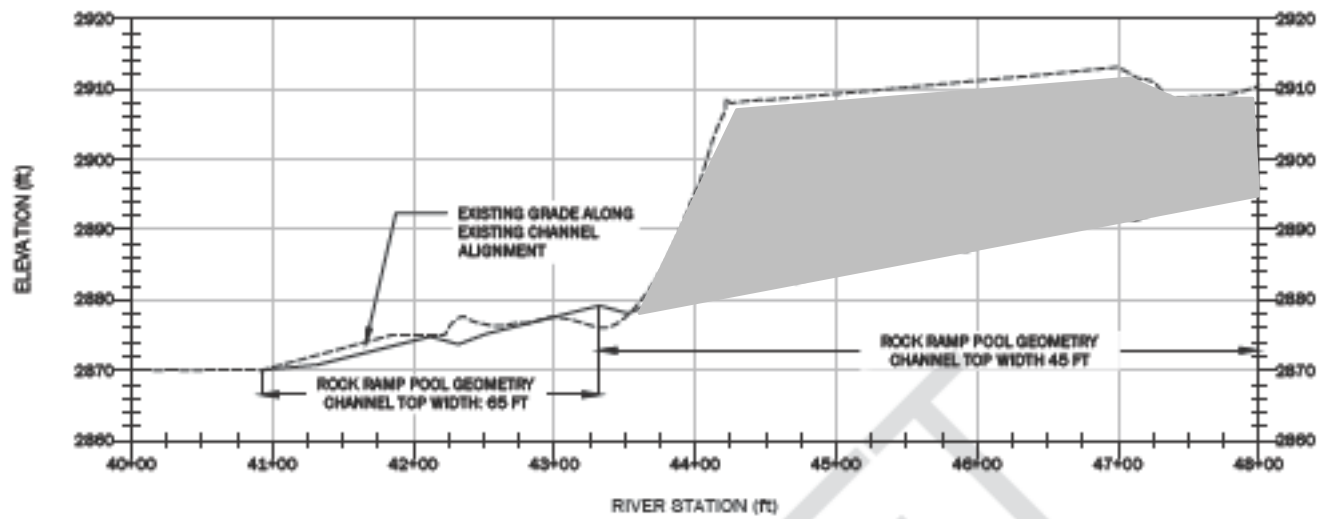
Proposed Channel Alignments	
South Fork Tieton River Fish Passage Study Yakima County, Washington	
GEOENGINEERS	Figure 5

Notes:

1. The locations of all features shown are approximates.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an associated document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Aerial from NAD imagery dated 7/29/2015; Contours from U.S. Geological Survey, 2014.
 Projection: NAD 1983 NAD83 StatePlane Washington South FIPS 4802 Feet

P:\subsector\p04\04a\map\Design\subsector00_04E011511-013.dwg 16:33.3 Data Export: 04/20/17 - 21:02 by burler



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3. Vertical Datum: MGD 88



VERTICAL EXAGGERATION: 5X
 1 INCH = 100V
 1 INCH = 20H

NO.	DATE	BY	REVISION

Concept Design
Not for Construction

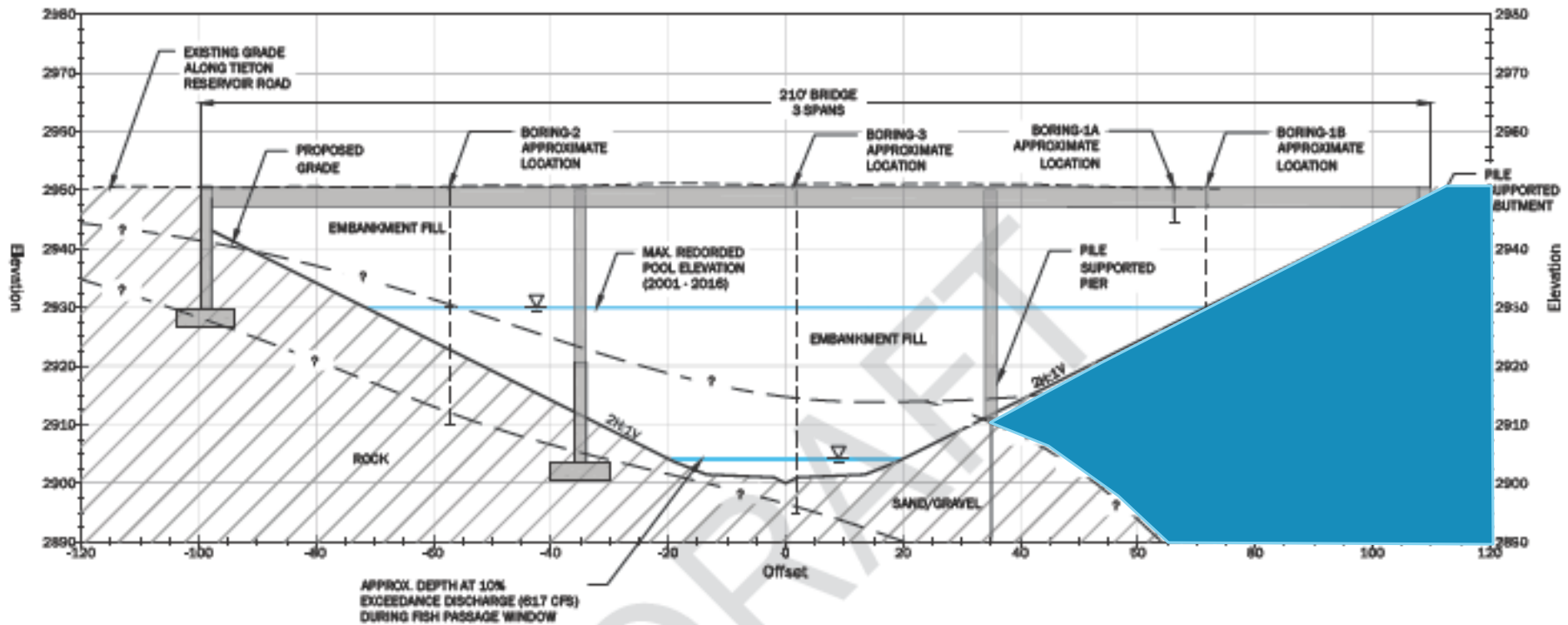
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SOUTH FORK TIETON RIVER FISH PASSAGE
 FEASIBILITY STUDY AND CONCEPT DEVELOPMENT
 YAKIMA COUNTY, WASHINGTON

ALIGNMENT 1
 CHANNEL PROFILE B

DRAWN: BHM	PROJ. NO.: 040590-16-00
DESIGN: BHM/TPH	DATE: 04/28/17
CHECKED: BSC/JFB	SHEET NO.: 3.3



ALIGNMENT 2
CHANNEL CROSS SECTION AT STA. 48+00

Notes:

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3. Vertical Datum: NWD 88
4. Fish passage window is defined as June 1 to September 1 during adult bull trout spawning migration period.



VERTICAL EXAGGERATION: 1X
1 INCH = 20V
1 INCH = 20H

NO.	DATE	BY	REVISION

**Concept Design
Not for Construction**

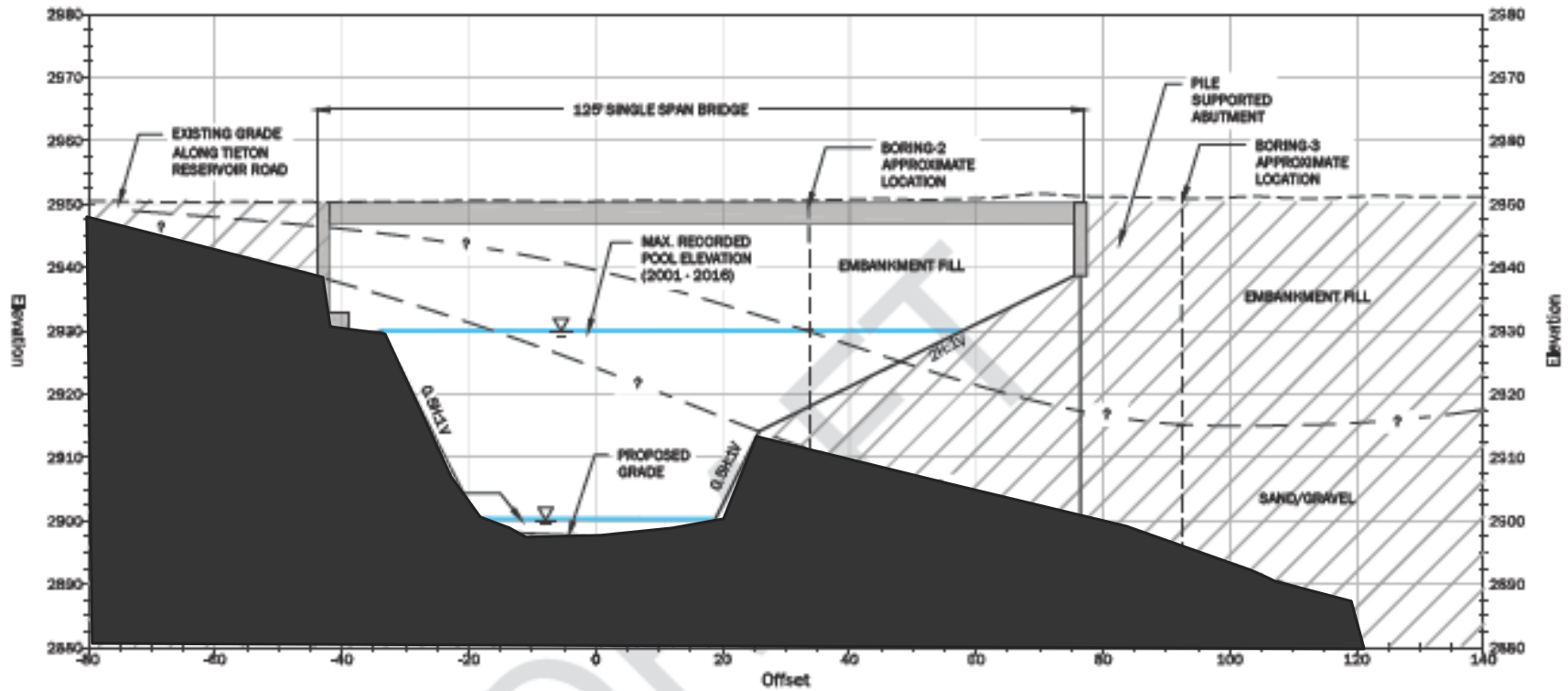
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SOUTH FORK TIETON RIVER FISH PASSAGE
FEASIBILITY STUDY AND CONCEPT DEVELOPMENT
YAKIMA COUNTY, WASHINGTON

**ALIGNMENT 2
PROPOSED BRIDGE CONCEPT**

DRAWN: BIM	PROJ. NO:
DESIGN: DRL	048590-16-00
CHECKED: JRG	DATE: 04/28/17
SHEET NO:	4.4



ALIGNMENT 3
CHANNEL CROSS SECTION AT STA. 47+56

Notes:

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3. Vertical Datum: NAVD88
4. Fish passage window is defined as June 1 to September 1 during adult bull trout spawning migration period.



VERTICAL EXAGGERATION: 1X
1 INCH = 20V
1 INCH = 20H

NO.	DATE	BY	REVISION

Concept Design
Not for Construction



SOUTH FORK TIETON RIVER FISH PASSAGE
FEASIBILITY STUDY AND CONCEPT DEVELOPMENT
YAKIMA COUNTY, WASHINGTON

ALIGNMENT 3
PROPOSED BRIDGE CONCEPT

DRAWN: BIM	PROJ. NO:
DESIGN: DRL	045290-16-00
CHECKED: JRG	DATE: 04/28/17
SHEET NO.	5.4



South Fork Tieton River Delta Region at River-Reservoir Interface Looking Upstream from RS 4,750

**South Fork Tieton River Fish Passage Feasibility Study and Concept Development
Yakima County, Washington**

GEOENGINEERS 

Photo 7

Erosion and Sedimentation Manual

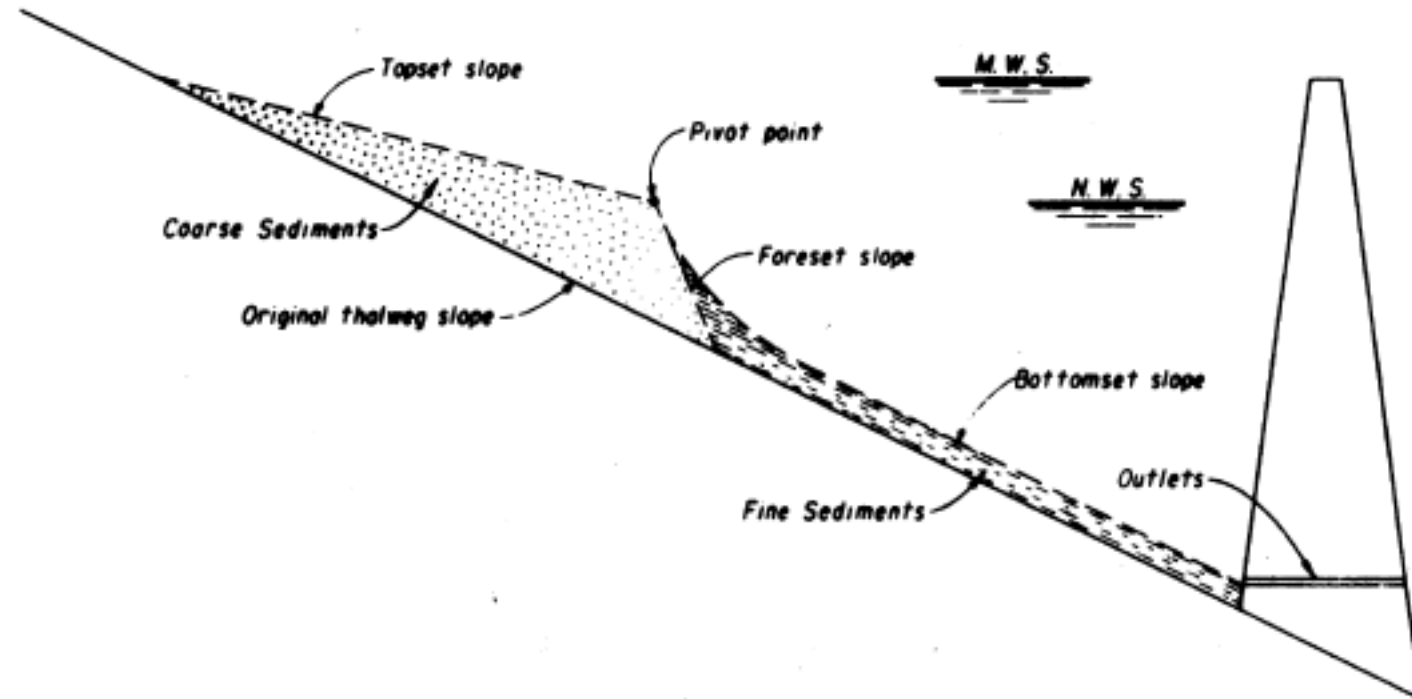
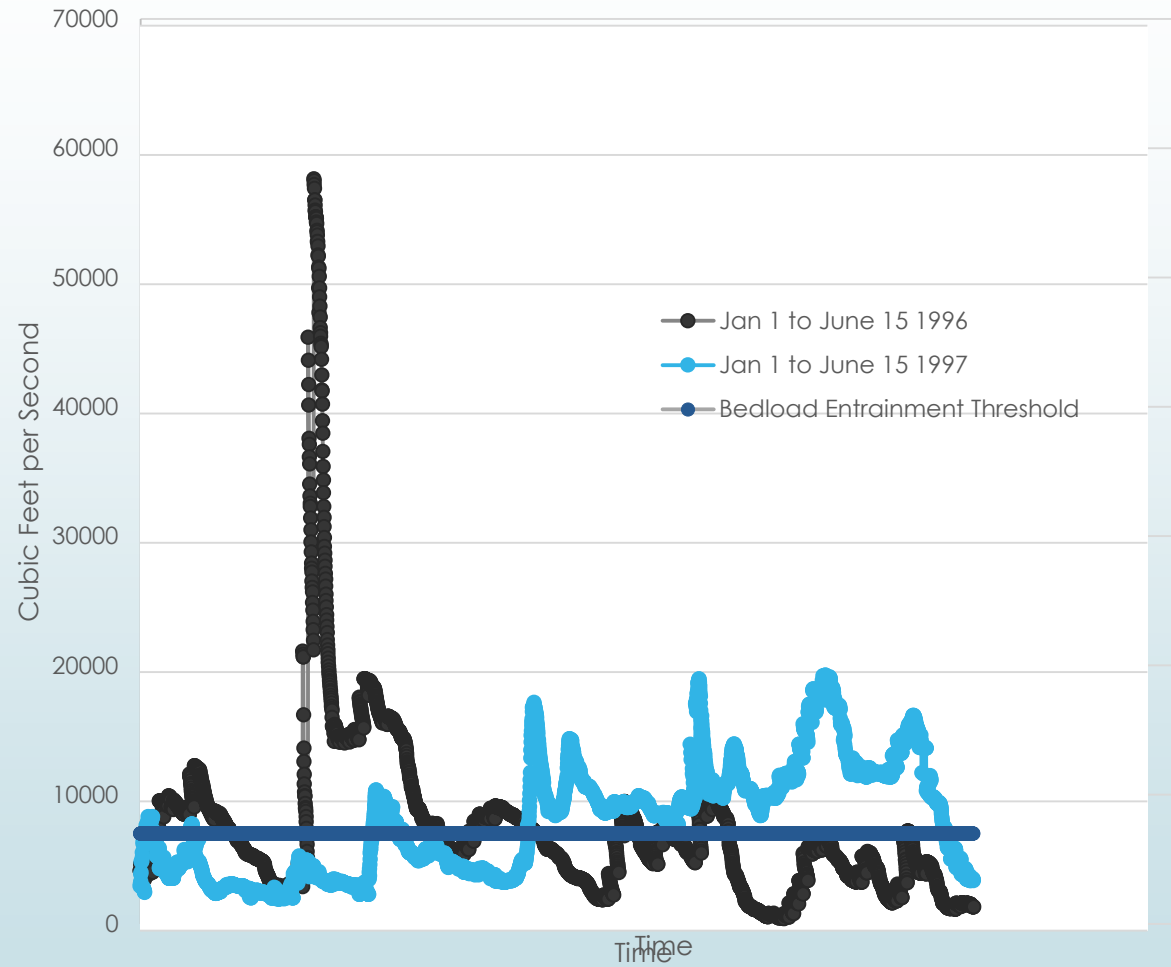


Figure 2.29. Typical sediment deposition profile (Bureau of Reclamation, 1987).

Yakima River at Parker 1996 vs 1997 Flows



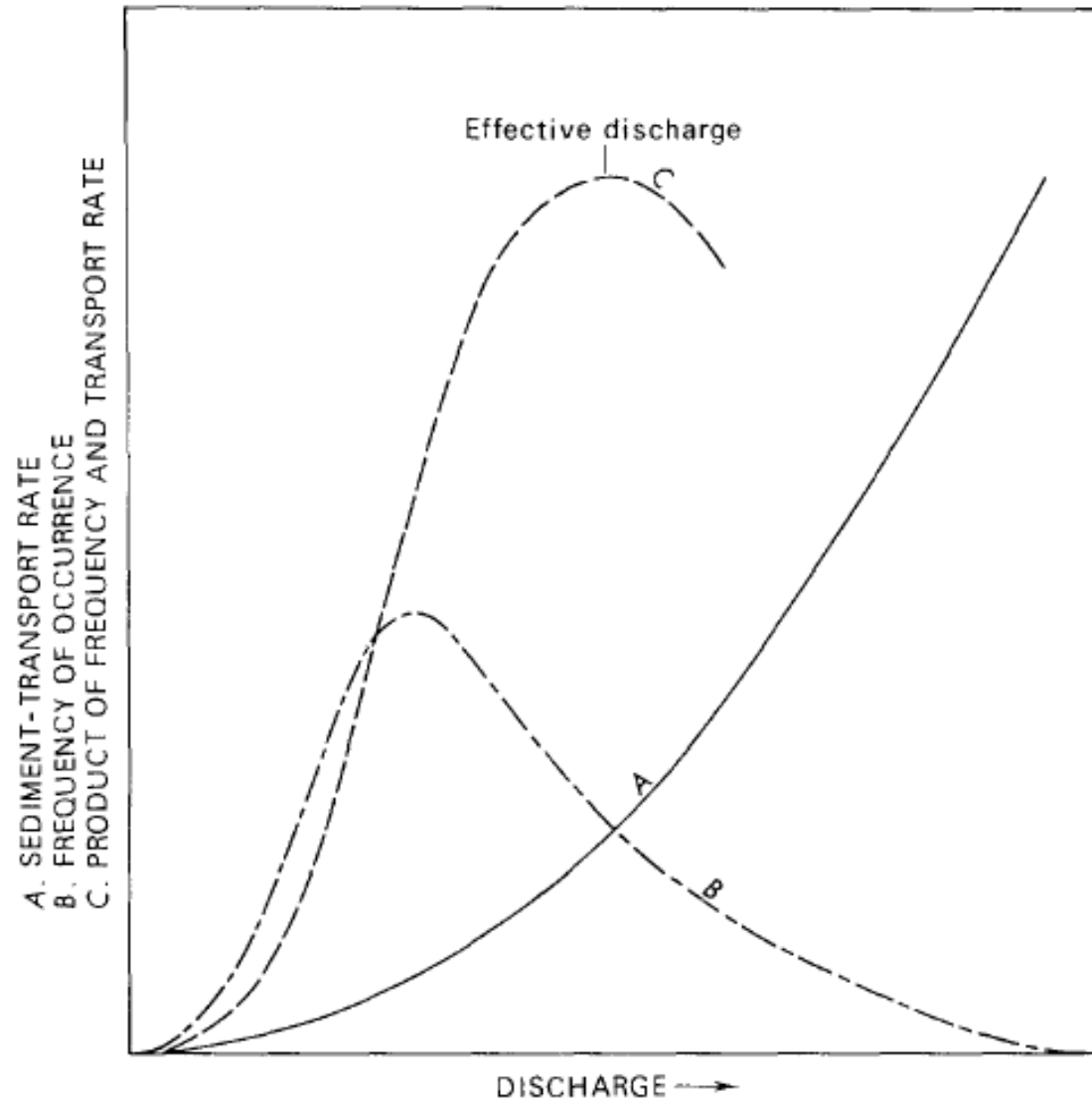
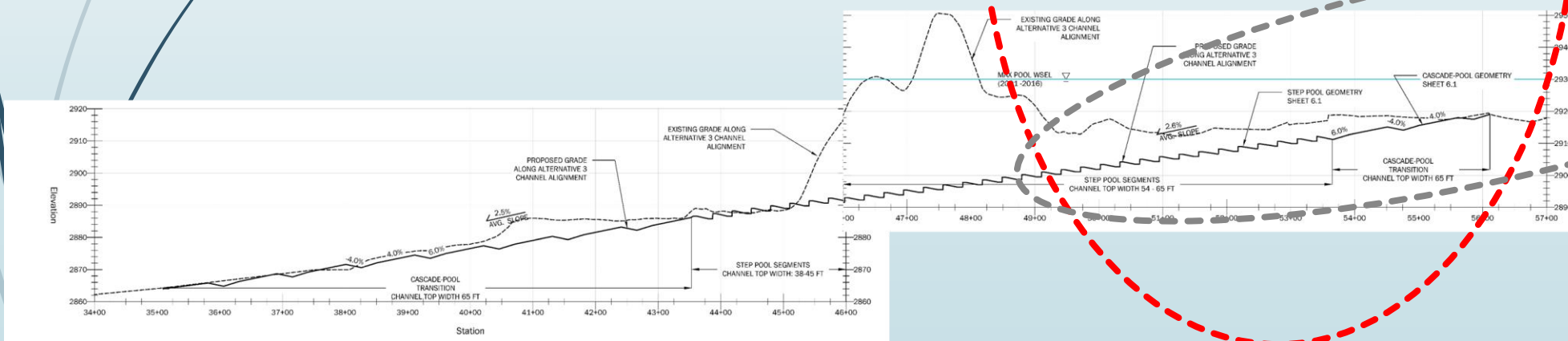
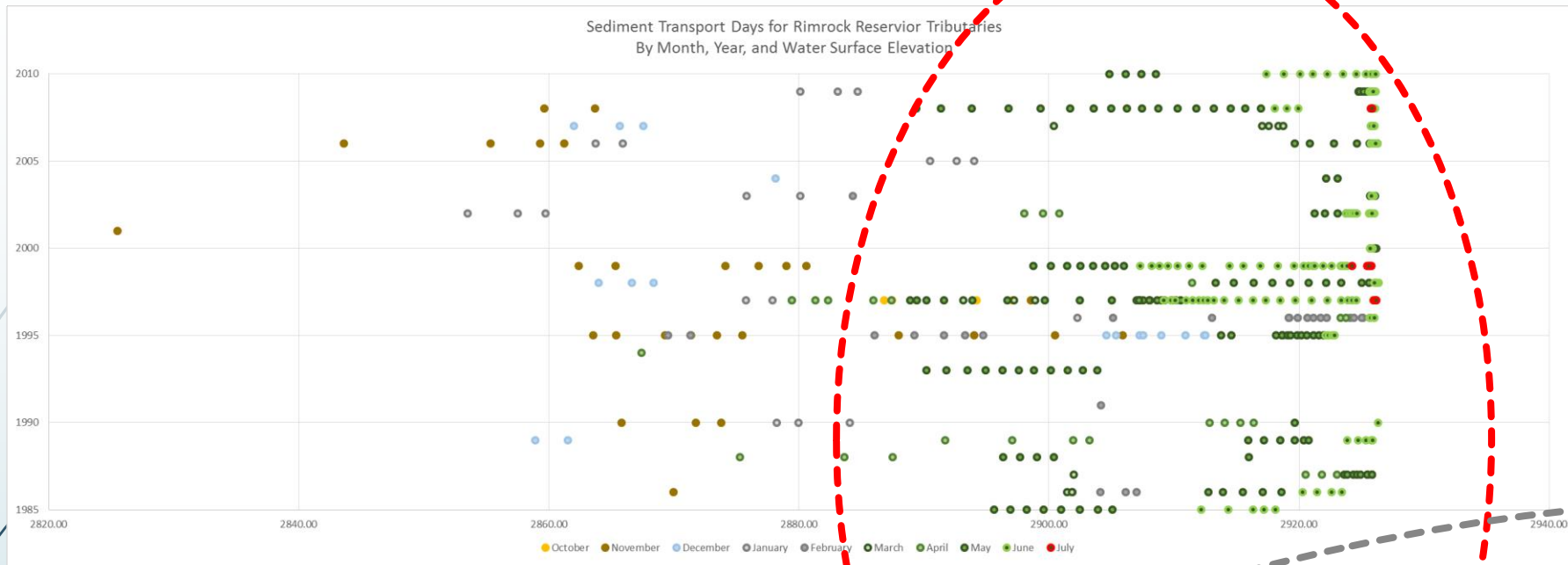



Fig. 1. Relations between discharge and sediment-transport rate, frequency of occurrence and the product of frequency and transport rate (after Wolman and Miller, 1960).





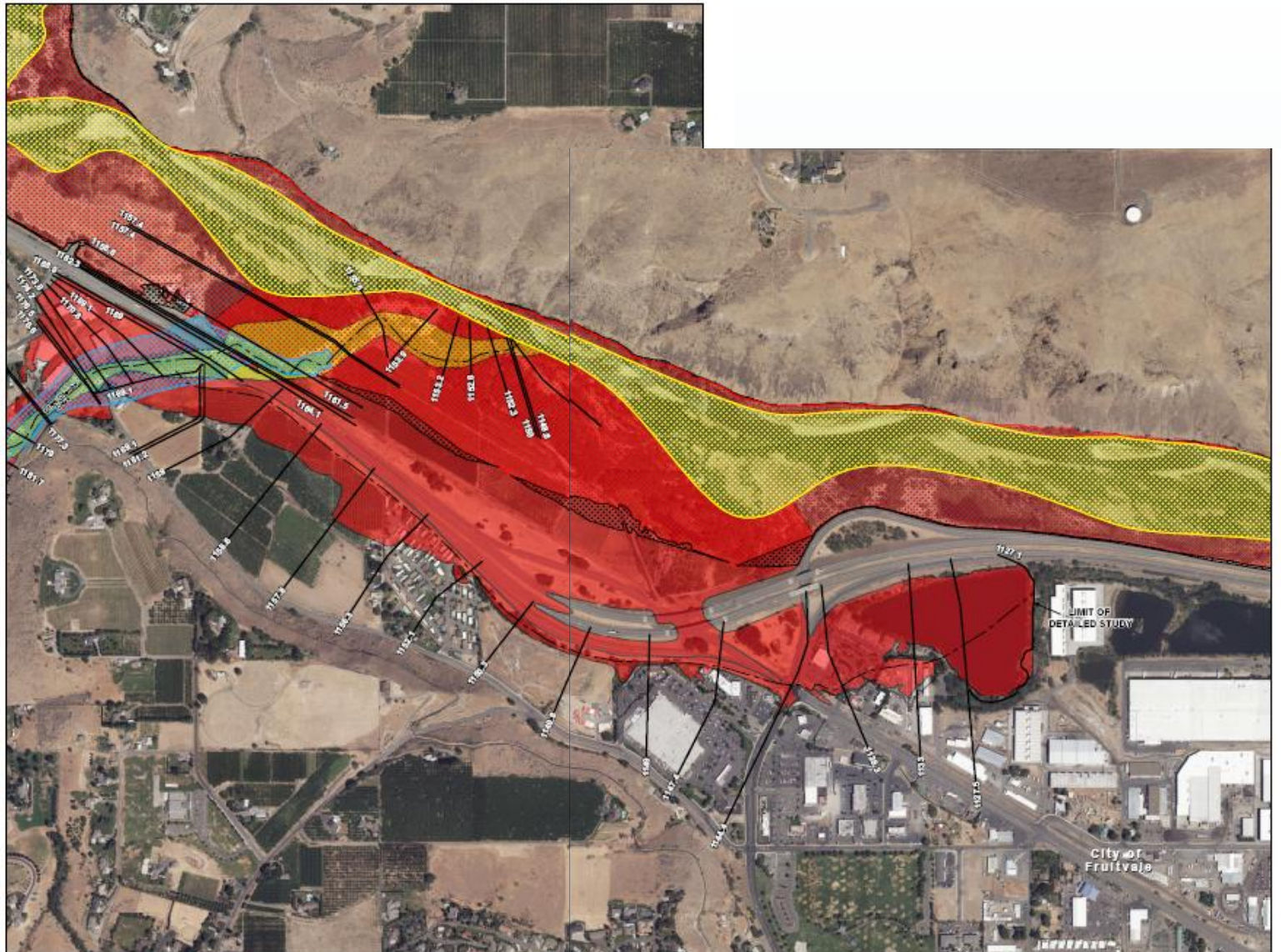
Modification, Flooding and Restoration on the Lower Naches and Cowiche











Effective Flood Zones

New Draft Flood Zones

Zone AE Cross Sections

Zone A Cross Sections

FEMA Region X
 YAKIMA COUNTY, WA
 Flood Hazard Study
 Draft Workmaps
 Page 23 (23 of 24)
 May 2017









So what is the Flood Control Zone District going to do?

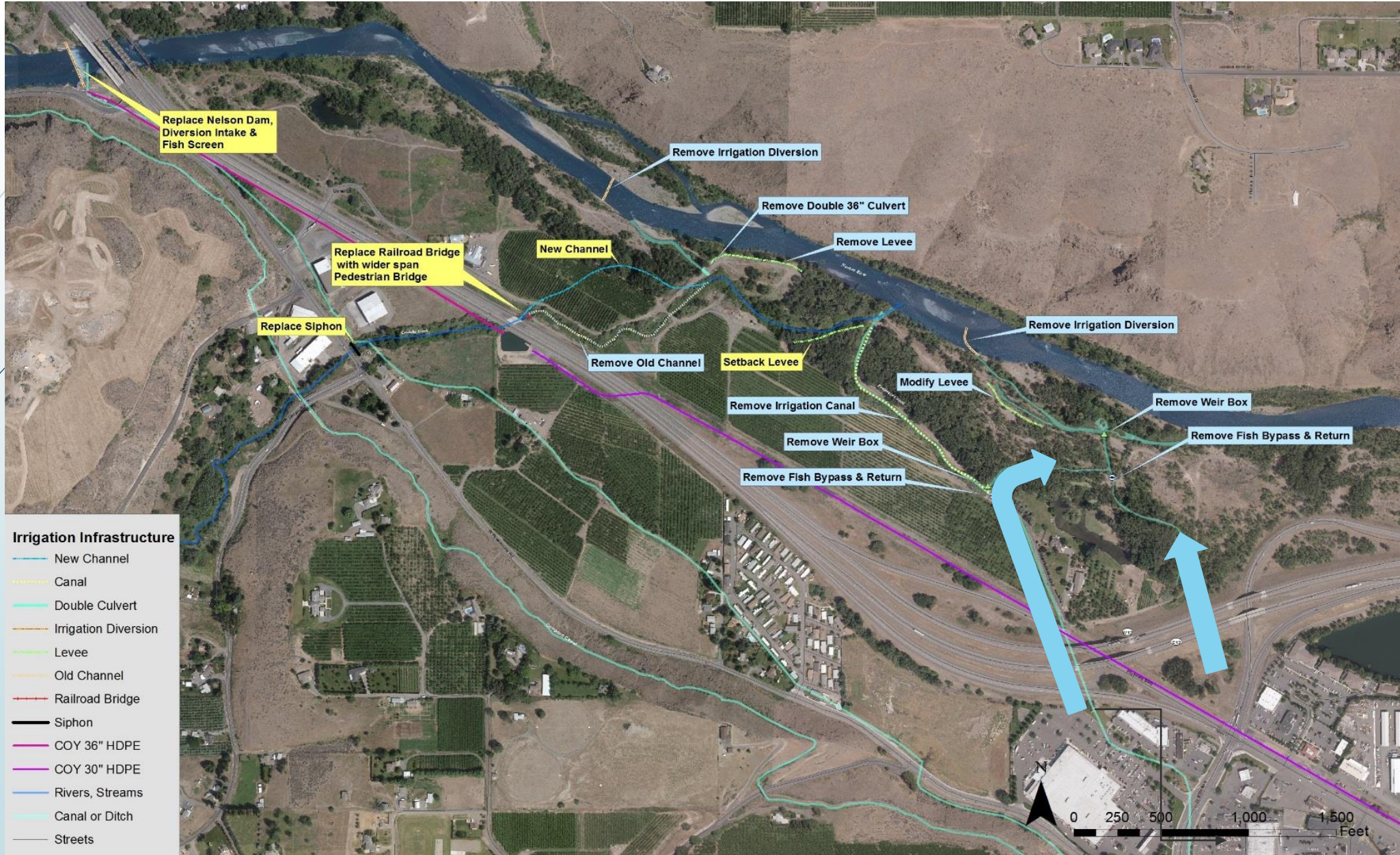
Modify Upper Yakima CFHMP in cooperation with City.

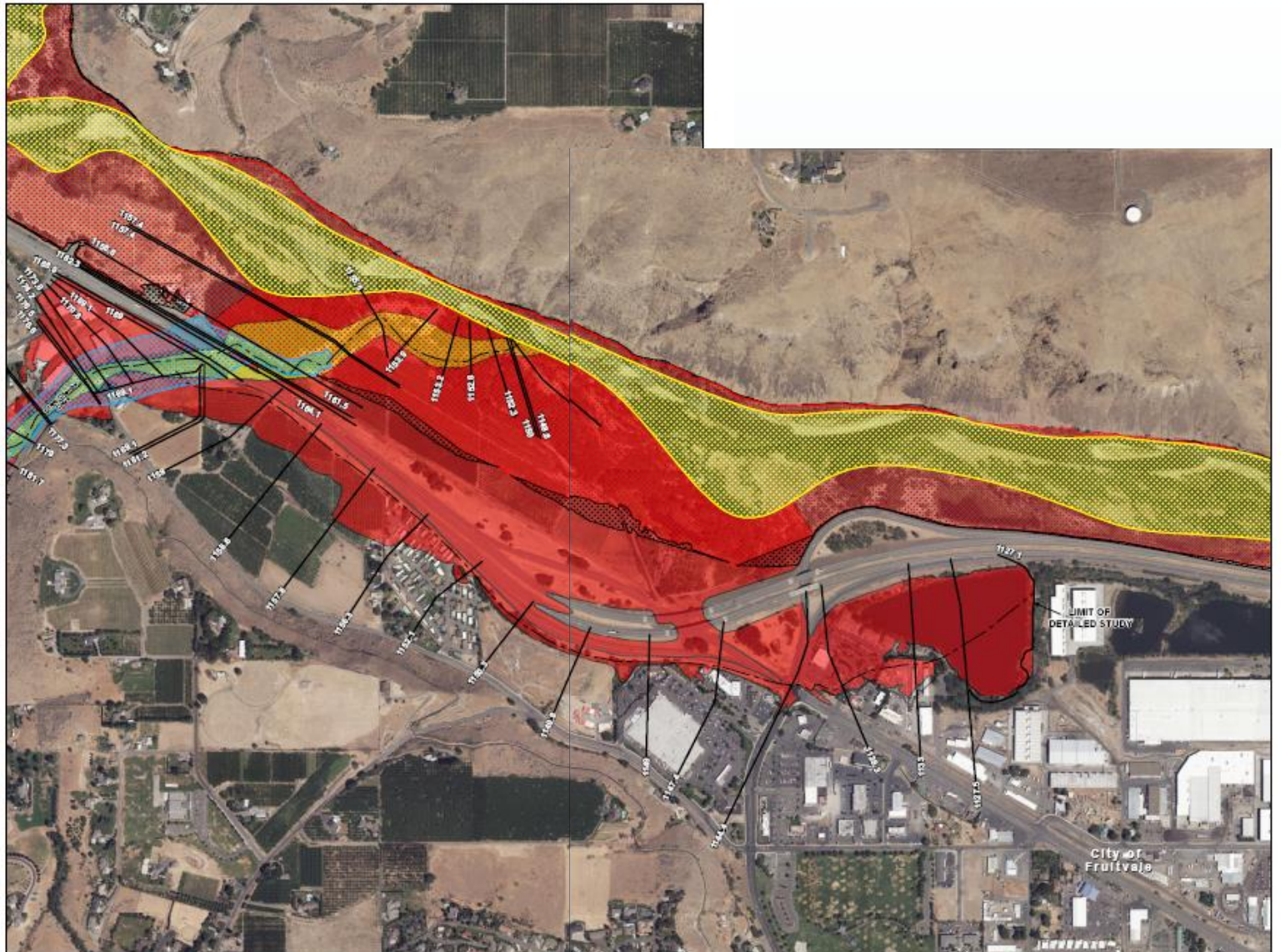
- Short Term Action
- Medium Term Actions
- Long Term Actions





Put a Board in the hole so the wind don't blow through no more.


Implement the Nelson and Lower Cowiche Restoration Actions.






Effective Flood Zones: 


New Draft Flood Zones: 

Zone AE Cross Sections: 

Zone A Cross Sections: 

0 500 1000 2000 Feet

FEMA Region X
YAKIMA COUNTY, WA
Flood Hazard Study
Draft Workmaps
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May 2017



Need New Bridges

