



Sonoma  
Water

# Dry Creek Habitat Enhancement

PHYSICAL MONITORING AND FISH MONITORING  
JANUARY 12, 2026

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[sonomawater.ca.gov](http://sonomawater.ca.gov)





# Dry Creek Habitat Enhancement Project Summary

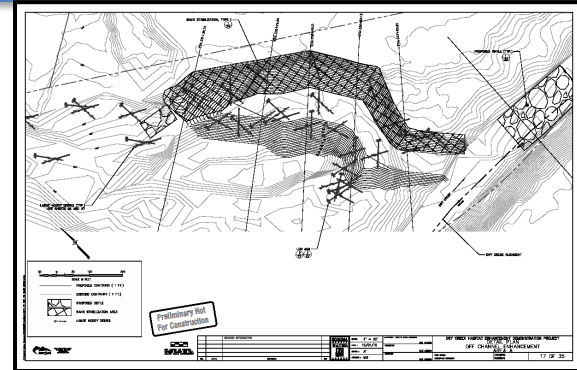
- 2012
- 2013
- 2014
- 2016
- 2017
- 2018
- 2019
- 2021
- 2022
- 2023
- 2024





# Three types of monitoring

- **Implementation (as built)**– Constructed per approved design?
- **Effectiveness (habitat)** – Are desired habitat conditions being created?
- **Validation (biological response)** – Are fish benefiting?





# How do we evaluate habitat?

- Dry Creek Adaptive Management Plan
  - Primary metrics
    - Depth: 0.5 – 4.0 ft
    - Velocity: <0.5 ft/s
    - Aquatic habitat shelter
  - Framework
    - Evaluate
    - Rate
    - Maintain

## Dry Creek Adaptive Management Plan (AMP)

Final

Prepared for

Sonoma County Water Agency

Prepared by

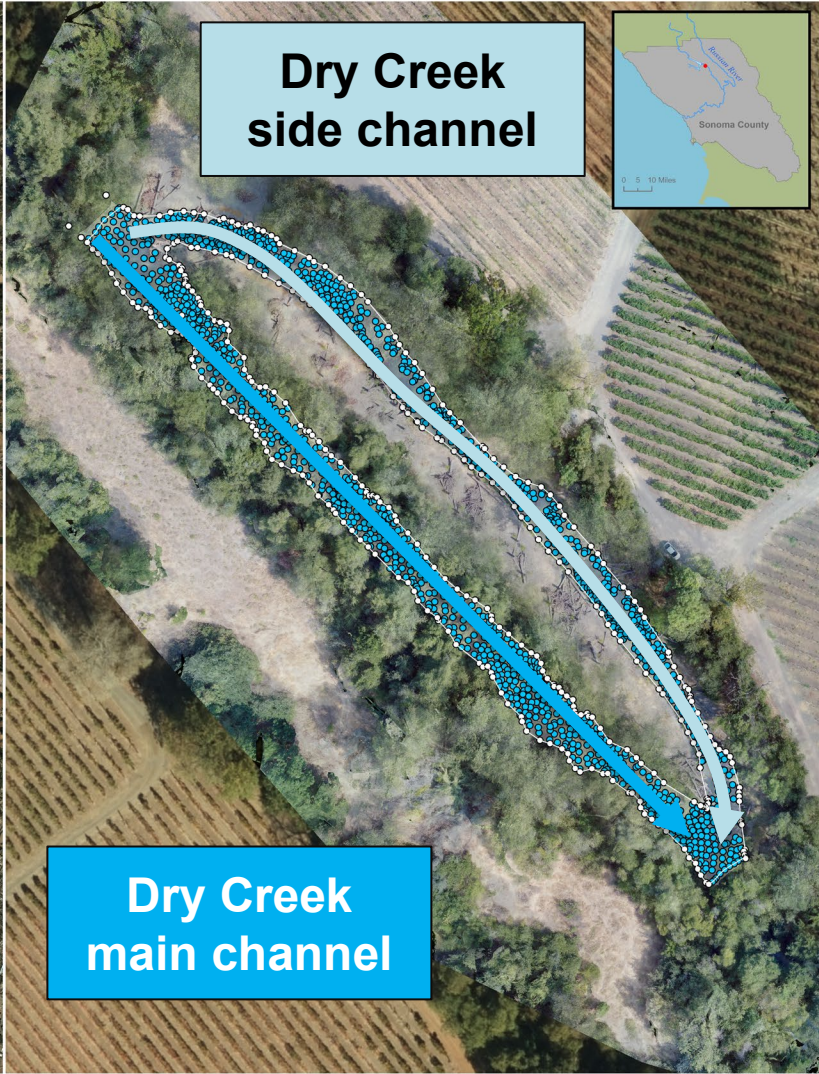
Marc Porter, David Marmorek, Darcy Pickard and Katherine Wieckowski  
**ESSA Technologies Ltd.**  
Suite 300, 1765 West 8th Avenue  
Vancouver, BC V6J 5C6

May 9, 2014



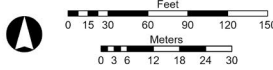
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Post-Effective Flow, July 2024



Reach Name: Foley, Gallo  
Project Reach: 04  
Enhancement Reach: 06  
Inter-Fluve Reach: 13b  
River Mile: 12.23 (River Kilometer 19.69)  
Reach Length: 722 ft (220 m)

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Map Date: 11/24/2025

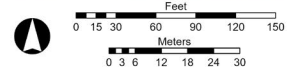




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Map Date: 11/24/2025

Post-Effective Flow, July 2024



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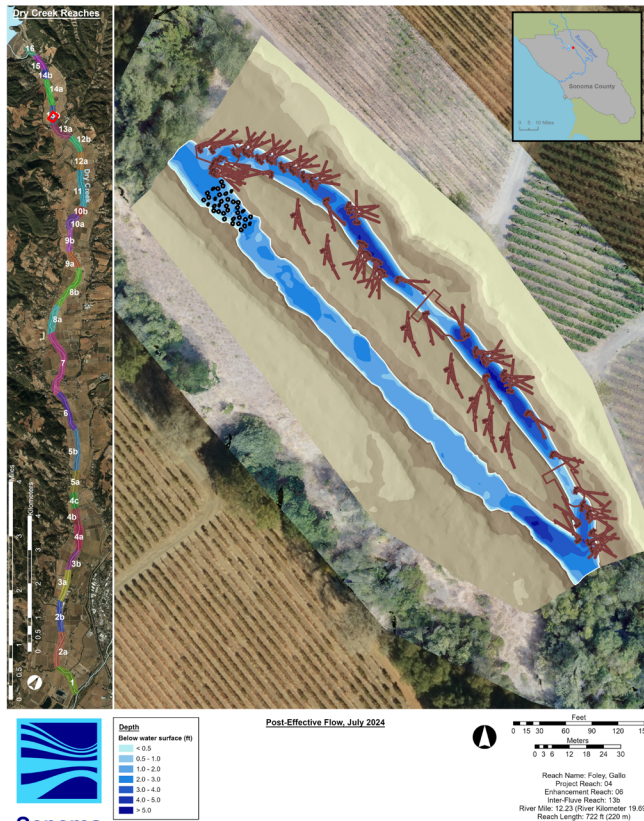
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# Depth

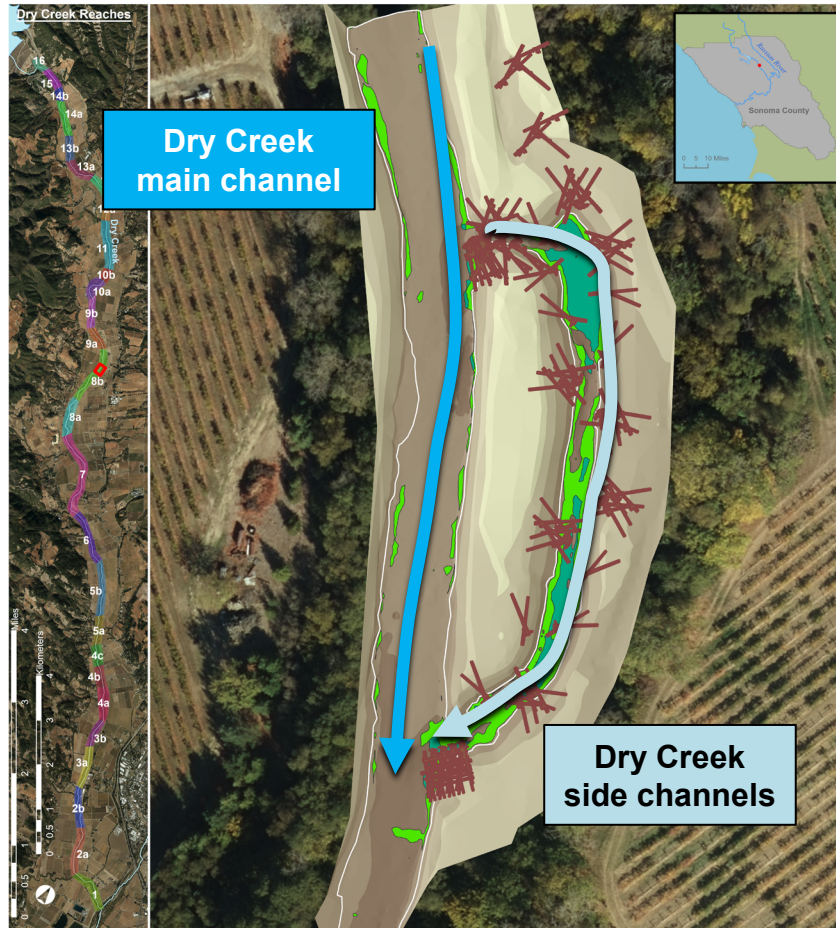
# Velocity

# Shelter



# Optimal Depth and Velocity

24% of area  
meets optimal  
depth and  
velocity



50% of area  
meets optimal  
depth and  
velocity



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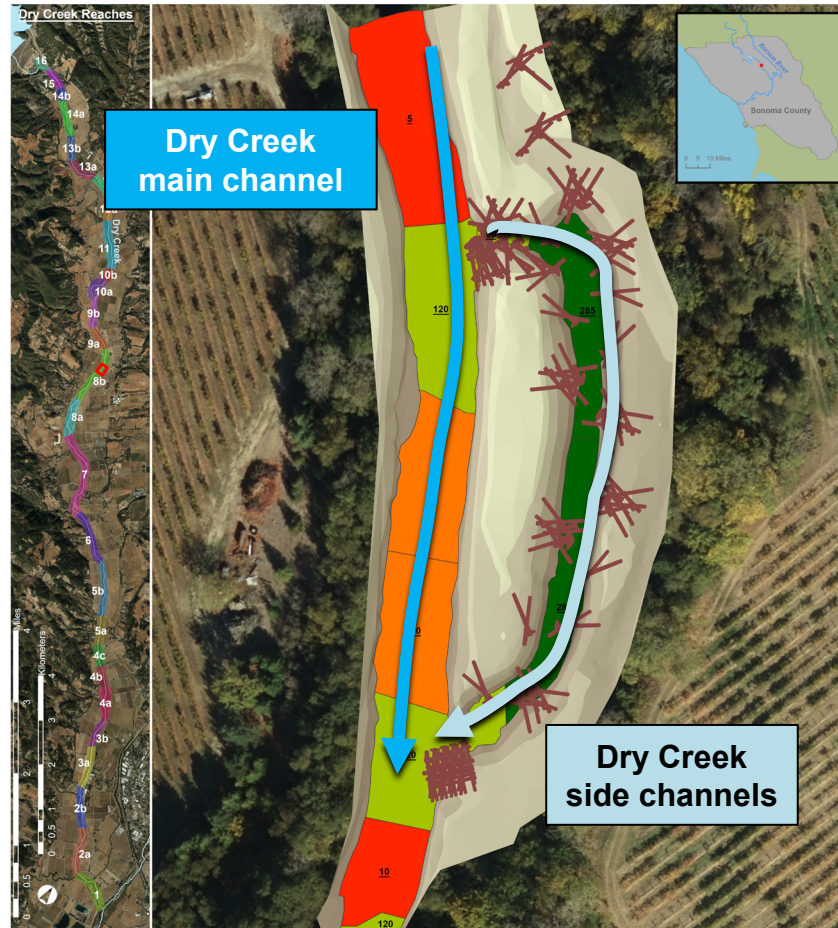
Map Date: 1/14/2025

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# Aquatic Habitat Shelter

**79** mean  
shelter score  
for all habitat  
types



**105** mean  
shelter score  
for all habitat  
types



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Map Date: 1/14/2025

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# Dry Creek Habitat Enhancement Reaches

## Upper segment

Dam influence

## Middle segment

Dam influence

Tributary input

## Lower segment

Dam influence

Tributary input

RR backwater



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# Dry Creek Habitat Enhancement Reaches

Upper segment  
Dam influence

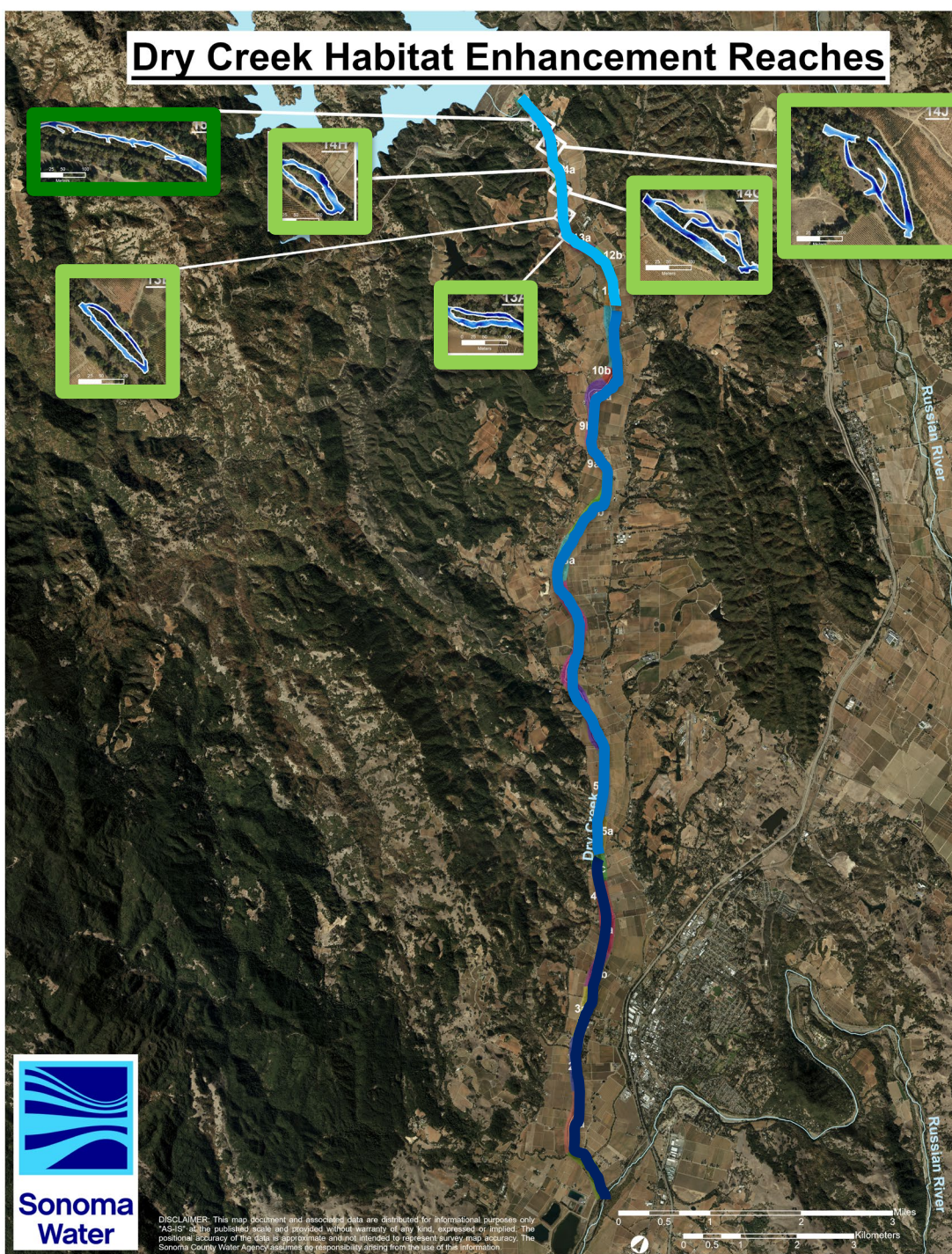
**Stable**  
Occasional  
maintenance

Middle segment  
Dam influence  
Tributary input

Lower segment  
Dam influence  
Tributary input  
RR backwater



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15	Excellent
14J	Good
14H	Good
14G	Good
13B	Good
13A	Good

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# Dry Creek Habitat Enhancement Reaches

## Upper segment

Dam influence

Stable  
Occasional  
maintenance

## Middle segment

Dam influence  
Tributary input

Aggradation  
Regular  
maintenance

## Lower segment

Dam influence  
Tributary input  
RR backwater

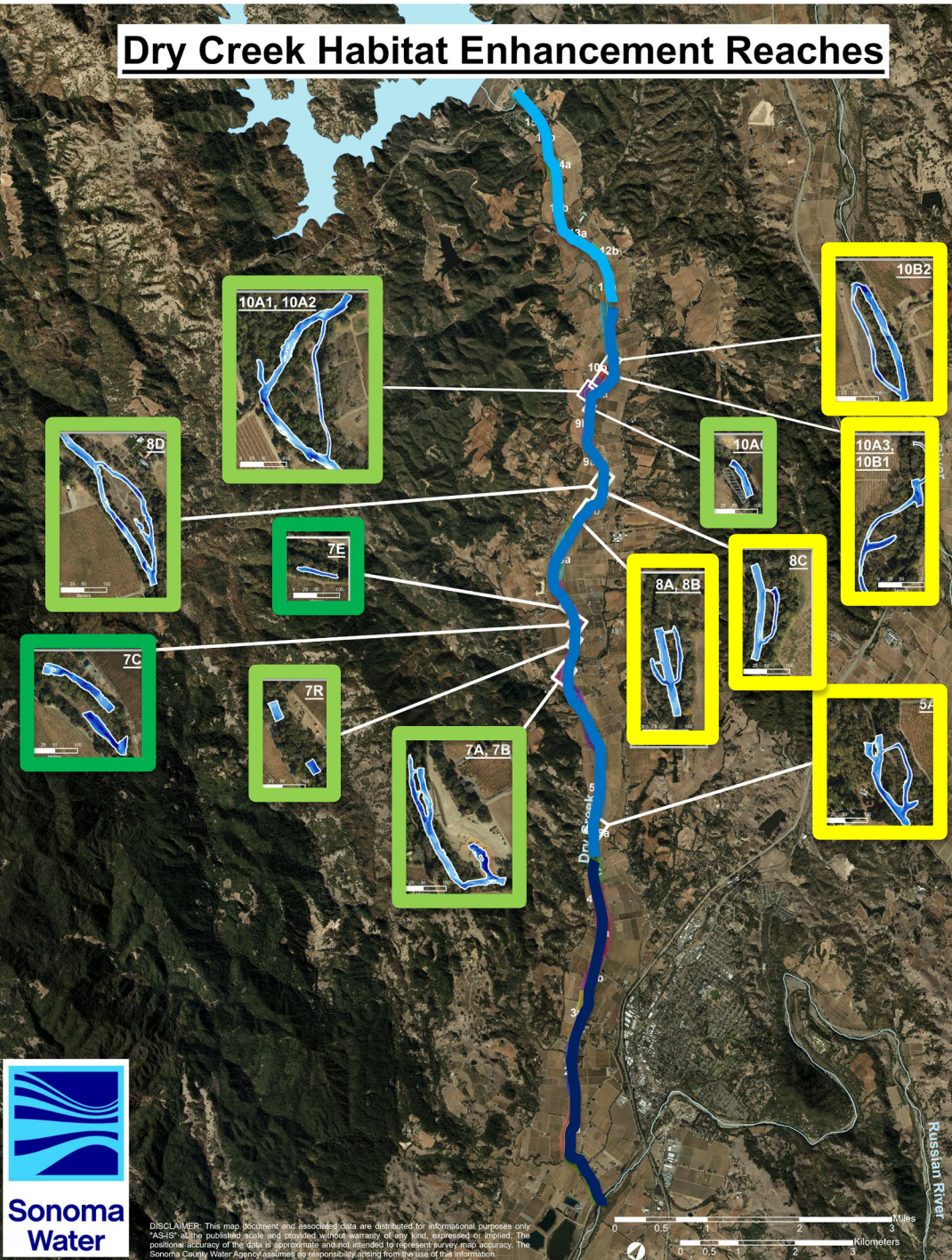


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10B2	Fair
10A3, 10B1	Fair
10A1, 10A2	Good
10A0	Good
8D	Good
8C	Fair
8A, 8B	Fair
7E	Excellent
7C	Excellent
7R	Good
7A, 7B	Good
5A	Fair



# Dry Creek Habitat Enhancement Reaches

## Upper segment

Dam influence

Stable

Occasional  
maintenance

## Middle segment

Dam influence

Tributary input

Aggradation

Regular  
maintenance

## Lower segment

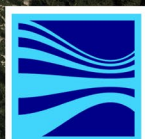
Dam influence

Tributary input

RR backwater

Aggradation

Regular  
maintenance



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0 0.5 1 2 3 Miles  
0 0.5 1 2 3 Kilometers

4C	Fair
4AB	Fair
2D	Poor
2C	Poor
2B	Fair
2A	Fair



# Dry Creek Habitat Enhancement Reaches

**Upper segment**  
Dam influence

**Stable**  
**Occasional**  
**maintenance**

**Middle segment**  
Dam influence  
Tributary input

**Aggradation**  
**Regular**  
**maintenance**

**Lower segment**  
Dam influence  
Tributary input  
RR backwater

**Aggradation**  
**Regular**  
**maintenance**



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Reach	Rating
15	Excellent
14J	Good
14H	Good
14G	Good
13B	Good
13A	Good
10B2	Fair
10A3, 10B1	Fair
10A1, 10A2	Good
10A0	Good
8D	Good
8C	Fair
8A, 8B	Fair
7E	Excellent
7C	Excellent
7R	Good
7A, 7B	Good
5A	Fair
4C	Fair
4AB	Fair
2D	Poor
2C	Poor
2B	Fair
2A	Fair





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