

Stream:

Truckee

Maximum Summer Temperature=

Late Summer Flow= very limited CPF 10-15% ADF

Annual Flow Variation= mod, but never dry

Substrate= occasional patches SAV

Summary

Parameter	Observed	HQI Rating	Comments
1) Nitrate-Nitrogen	.07 mg/l	2	
2) Late summer flow	VERY limited	1	See attached WRD
3) Annual flow variation	mod,	2	
4) Max summer temp.	18.5°C	4	
5) Eroding streambanks	0%	4	
6) Mean width	48.17m	0	
7) Cover	79.49%	4	
8) Velocity	.89 m/s	3	
9) Substrate	OCC. PATCH	2	

Stream:

Truckee River

Observed Standing Crop (& date) =

Predicted Standing Crop with HQI:

$$\begin{aligned} \log_{10} (Y + 1) = & \{(-0.903) + (0.807) \log_{10} (X_1 + 1) \} \\ & + (0.977) \log_{10} (X_2 + 1) \\ & + (1.233) \log_{10} (X_3 + 1) \\ & + (0.631) \log_{10} (F + 1) \\ & + (0.182) \log_{10} (S + 1) \} [1.2085] \end{aligned}$$

$$\begin{array}{r} 24 \\ .47 \\ .86 \\ 1.07 \\ 0 \\ \hline - .90 \end{array}$$

- Where: \hat{Y} = Predicted trout standing crop
- 1 X_1 = Late summer flow (assigned HQI rating #)
- 2 X_2 = Annual flow variation
- 4 X_3 = Maximum summer temperature
- F = Food index = $X_3 (X_4) (X_9) (X_{10}) = 4 \times 2 \times 2 \times 3 = 48$
- S = Shelter index = $X_7 (X_8) (X_9) (X_{11}) = \emptyset$
- 2 X_4 = Nitrate
- 4 X_7 = Cover
- 5 X_8 = Eroding streambanks
- 2 X_9 = Substrate
- 3 X_{10} = Velocity
- 0 X_{11} = Width

$$\Sigma = 1.74$$

$$\hat{Y} = \text{antilog}_{10} 1.74 (1.2085) - 1$$

$$= 65.4 \text{ kg/ha}$$

$$= 58.20 \text{ lb/acre}$$