



Major Site Considerations

The Farmers Screen requires sites to meet specific conditions in order to operate properly. Put in simplest terms, the host stream must drop in elevation and carry enough flow for three flow paths – diverted flow, bypass flow, and environmental flow left in stream. The following six points consider this further:

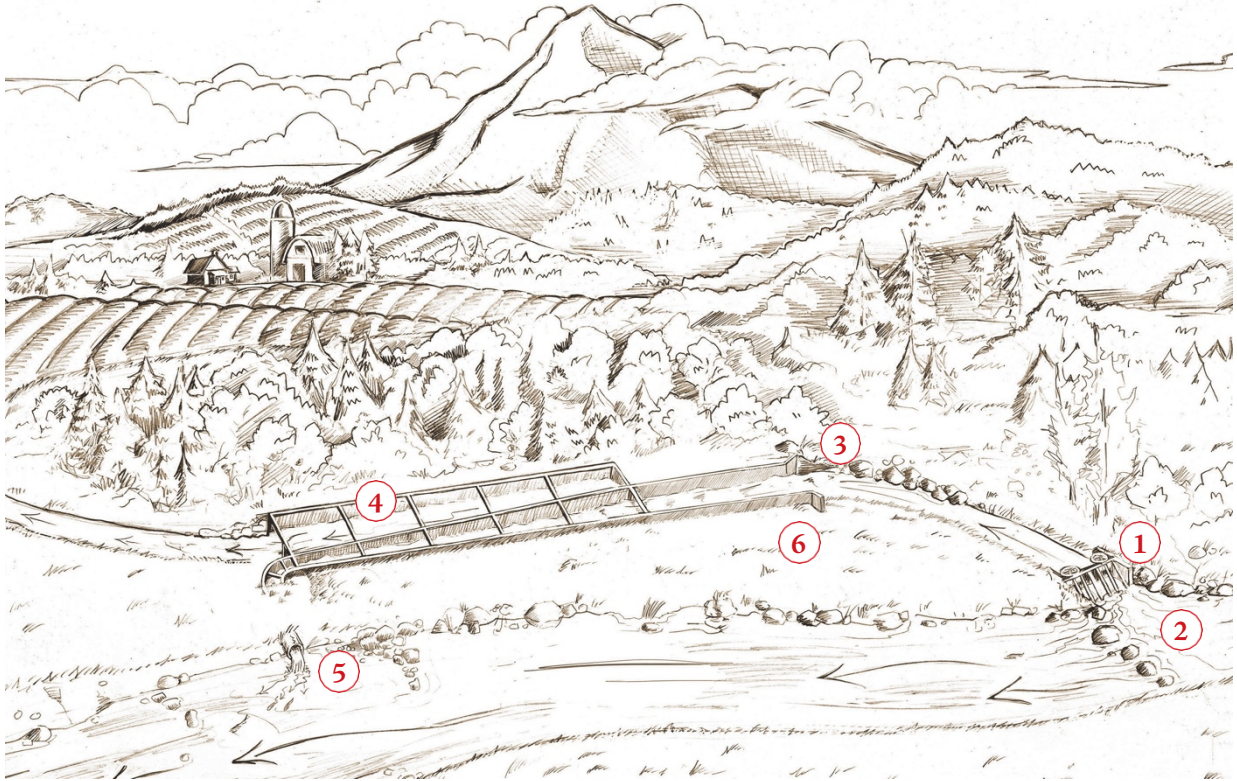


Figure 3 - Siting Considerations for the Farmers Screen

- ① The proposed site must be located off-channel and flow to the screen controlled with a properly functioning head gate.
- ② There must be sufficient flow entering the screen to ensure 5 to 10% of the initially diverted flow is returned to stream as bypass flow.
- ③ Water at the leading edge of screen must be steadily and uniformly flowing at 3 to 6 feet per second (1 to 2 meters per second). A straight flume five times longer than the width of the screen's leading edge will generally create this even flow.
- ④ A drop in water surface elevation of 6 to 12 inches (0.15 to 0.30 meters) is needed between the flume and the exit of the screened flow.
- ⑤ The host stream must not back up the fish return. A stream gradient of 1.5 to 2.0% is generally sufficient.
- ⑥ The screen area can be estimated as 6 square feet for every cfs of flow (2 square meters for every 100 L/s of flow), and the footprint of the structure is typically twice that. The length to width ratio of this footprint varies significantly, but for modular (predesigned) Farmers Screens these dimensions are listed in tables in the section on screen support structures.

