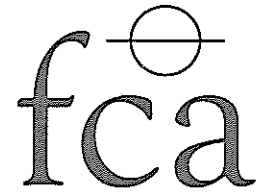


Bryan Nordlund  
Board Chair  
Fish Screen Oversight Committee (FSOC)  
Columbia Basin Fish and Wildlife Authority  
851 SW Sixth Avenue, Suite 300  
Pacific First Building  
Portland, Oregon 97204



November 16, 2009

Dear Bryan:

As discussed at the FSOC Meeting on October 22, 2009, Farmers Conservation Alliance (FCA) is providing information regarding our site selection criteria for the Farmers Screen. In order to provide the broadest overview of our siting process, the following documents are attached to this letter:

- Farmers Screen Site Selection Process
- Farmers Screen Initial Questionnaire
- Farmers Screen Site Evaluation
- Farmers Screen Siting Checklist

We feel these documents are a great starting point to evaluate potential screen sites and clients. However, with each meeting, proposed screen site, and installation, we learn new questions to ask and new vetting techniques. Therefore, if you have suggestions on how to improve this documentation, we would very much appreciate your feedback. As we all know, the better job we do vetting a potential client and screen site, the greater the likelihood of achieving a successful project.

With the submission of these documents, FCA is looking forward to hearing feedback from the NMFS engineer meeting in early December as well as the next FSOC meeting in January 2010.

We appreciate your time and consideration and look forward to discussing the Farmers Screen process with you further.

Sincerely,

  
Julie Davies O'Shea  
Executive Director

  
Les Perkins  
Business Development Director

cc. Dave Ward  
FSOC Committee Members



## **Farmers Screen Site Selection Process**

Farmers Conservation Alliance (FCA) has developed a method for evaluating potential Farmers Screen sites through a two step process. This process was developed over a four year period as FCA performed over a hundred site visits all around the Pacific Northwest to evaluate potential sites for Farmers Screen installations. The process was developed with an eye to efficiency for both FCA and the landowner. It is expensive and time consuming to evaluate potential sites and therefore is imperative that a system allows FCA to determine as quickly as possible whether or not a site is appropriate for a Farmers Screen installation.

### **Step 1:**

Typically, either a landowner or a third party interested in screening a diversion contacts FCA to learn more about the Farmers Screen. At this point, FCA attempts to gather as much information as possible about the site and the project in general. The Farmers Screen Initial Questionnaire contains a complete set of questions that FCA attempts to answer either through a phone call, email, or standard mail. This form is designed to provide enough information to determine if a site visit is warranted. The questions ask for specific information that will help determine whether or not the site meets The Farmers Screen Siting Criteria Checklist as outlined in the document bearing the same name.

Once The Farmers Screen Initial Questionnaire has been completed, FCA staff reviews the information (and follows up for more information if necessary) and makes a determination based on The Farmers Screen Siting Criteria Checklist as to whether or not a site visit is warranted to gather more detailed information. If a site does not meet The Farmers Screen Siting Criteria Checklist at this point, it is deemed to be an inappropriate site for the Farmers Screen. The land owner or project coordinator is then notified and given as much information on alternative screen technologies as FCA can provide.

### **Step 2:**

If the information from The Farmers Screen Initial Questionnaire conforms to The Farmers Screen Siting Criteria Checklist, then a site visit is scheduled. The purpose of a site visit is to confirm the information provided in The Farmers Screen Initial Questionnaire and to gather additional information. To ensure comprehensive data collection on site, FCA uses the Farmers Screen Site Evaluation Form. The Farmers Screen Site Evaluation form is

designed to gather the maximum amount of information in a single visit.

The actual site visit provides an opportunity to gather more detailed data, information, and observations as to the specific conditions at the site. The site visit provides preliminary survey data that will determine the elevation differentials which in turn allows FCA to have certainty as to the applicability of a specific site. Also, evaluation of existing infrastructure, river or stream conditions, geomorphologic information, and general observations of the site provide a much better understanding of the challenges associated with a particular site and therefore an understanding of the applicability of the Farmers Screen on that particular site. The site visit is a time when FCA staff can directly question the landowner, any agency representatives, and any other project participants about stream flows, sediment, debris, and diverted water quantities. For small streams, this information is typically anecdotal, but that is often the only information available.

After the site visit, all gathered information from both The Farmers Screen Initial Questionnaire and The Farmers Screen Site Evaluation form is combined into one document that summarizes the project information. FCA staff then reviews the information to evaluate the applicability of the Farmers Screen for that particular site. If the site does not meet The Farmers Screen Siting Criteria Checklist, or for any other reason does not appear to be a good fit for FCA or the Farmers Screen, then the landowner or project coordinator is notified and informed that the Farmers Screen is not appropriate for that site. Recommendations are made for other technologies that might be appropriate and who to contact for more information.

If the site does appear to be appropriate for the Farmers Screen, then the landowner or project coordinator is asked to sign the project information document, declaring that the information is true to his/her knowledge and that they understand that the project will be developed based on that information. At this point, actual project development begins in conjunction with any and all project partners including all applicable state and federal agencies.

Project development involves developing a site plan, determining the operation range necessary for the Farmers Screen, determining any necessary infrastructure to support the Farmers Screen, screen location, screen structure elevations, and the appropriate return route and elevations. Project development is done in conjunction with all applicable resource agencies.

Again, if at any point in this process it is determined that the Farmers Screen is not an appropriate technology for the site, then the project coordinator or landowner is notified and provided with alternative screen information.



## Farmers Screen Initial Questionnaire

This form is designed to gather preliminary information that will help FCA to determine how we can best serve your particular organization. The information will be confidential and will not be released to another party without your permission. We realize that some of the requested information may not be available, however providing as much information as possible early in the process will help us to save time and money for our organization and yours.

1. Organization name (owner of water right)
2. Public or privately held?
3. Contact name and title
4. Address, phone, fax, email, web address
  
5. Location of diversion to be screened (city, county, state, water source diverting from, GPS coordinates if available)
6. Is the diversion on private or public land? If public, is it local, state, or federal?
7. Is the diversion currently screened and if so, what type of screen?
8. Does the diversion currently have a headgate?
9. Is there a dam associated with the diversion?
10. How is the water conveyed from the water source to the screen location? (canal or pipe)
11. Is there a hydroelectric project associated with this diversion?

12. Has a site survey been completed? If so, can you supply the survey?
13. What is the elevation difference between the point of diversion and the point at which the diverted water enters the canal or pipe that delivers water to end users?
14. Basin, sub-basin located in:
15. Name of Watershed Group and Water Conservation District?
16. Water right (quantity, type of use, permit number, and date):
17. Typical quantity of water diverted (high and low CFS and approximate times of year), how was this determined (estimate, gauging station, etc.)
18. Is water diverted year round?
19. What are your high and low water temperatures during the year? Do you ever experience freezing issues while diverting?
20. At any time during the year do you take 100% of the available water?
21. Do you have sediment, debris, or algae problems at this site? If so, what times of the year are of concern? Any details available will be helpful in determining scope of the project.
22. Is the diverted water transported in a canal or is it piped? This information helps with the initial design process.
23. Who do you work with at the state and federal agencies? (ODFW, DSL, USFW, Forest Service, NOAA Fisheries, etc.). FCA has positive relationships with all of the applicable agencies and will assist your organization in obtaining permits and in working for a positive outcome for all parties.

24. Are you interested in applying for grant funding and if so would you like FCA to apply on your behalf? Grant funding is dependent on many factors including species of fish present and the presence of threatened or endangered species. If you feel comfortable sharing information about all species present, we can use the information to determine what grant funds your organization might be eligible for. If an agency has taken an enforcement action against your organization, it would be important to disclose this information now because it has a large impact on the funding available for your project.

Please return the completed questionnaire to:

Les Perkins  
fca  
14 Oak Street, Suite 302  
Hood River, OR 97031

Email: [les.perkins@fcasolutions.org](mailto:les.perkins@fcasolutions.org)  
Questions: 541.490.4062



## Farmers Screen Site Evaluation

The site evaluation is the second tier in evaluation of a potential project. The information gathered during the site visit is meant to provide enough information to either confirm that the site is appropriate for a Farmers Screen or to determine that another technology or solution would be necessary. It is essential that as much information is gathered during the site visit as possible. If acceptable to the landowner, state and federal agency representatives should be invited.

### Equipment Checklist:

- Still Camera
- Video Camera
- Tape Measure
- Laser Level
- GPS Receiver
- Flow Meter

Site Information:

(include city, state, watershed, river or stream name, FCA project name)

Invited Attendees:

Actual Attendees:

Date:

GPS Coordinates:

Elevation:

Describe existing infrastructure:

Conveyance: (canal or piped)

Photos:

- Point of Diversion
- Upstream
- Downstream
- Diversion structure
- Head gate
- Conveyance
- Potential screen site(s)
- Potential return flow point(s)
- Access
- Existing screen

Video:

- Stream conditions (up and down stream)
- Diversion function including head gate
- Conveyance
- Existing screen

Survey: (If possible, shoot and record the following elevations)

- Top of Diversion Structure
- Any other infrastructure (headgate, screen structure, weir, etc.)
- Top of water and high water mark in stream at diversion point
- Top of water and high water mark 100' above diversion point
- Top of water and high water mark 100' below diversion point
- Top of water, invert, and high water mark in conveyance:
- Just behind head gate or at beginning of diversion
- 50' down conveyance
- 100' down conveyance
- Any other relevant points

Sketch Site Plan Including:

- River or stream (up and downstream)
- Diversion Point
- Conveyance
- All existing structures
- Potential screen locations
- Potential return points



Questions to Ask:

(please identify who is answering the question)

1. What is the largest amount of water that is diverted during the year in CFS?
2. What is the smallest amount of water that is diverted during the year in CFS?
3. Is by-pass flow available at all times?
4. Is there any time of the year when 100% of the water is diverted?
5. Characterize the sediment or bed load in the system including timing and duration.
6. Characterize organic debris in the system including timing and duration.
7. Are there any records or data available regarding stream flow, diverted quantities, sediment, or bed load?

Notes:



## **Farmers Screen Siting Criteria Checklist**

A potential screen site must have all of the following characteristics to be appropriate for installation of a Farmers Screen:

1. Off channel site with some means of flow regulation such as a head gate.
2. Adequate flow to ensure by-pass flow availability at all times. Quantity of by-pass flow is a function of screen size.
3. A minimum of 6 inches of elevation differential in the conveyance from the point of diversion to the point of the distal end of the potential screen.
4. A minimum of 12 inches of elevation differential in the stream from the point of diversion to the point where the return pipe would enter the stream.
5. Adequate room to locate the screen structure in a place that is protected from high flow events.