Instructions for 10/04/06 Draft IMPLEMENTATION checklist
FB - **FISH PASSAGE IMPROVEMENT at BARRIERS**

To be used for fish passage improvement anywhere other than a stream crossing but, includes grade control or back-flooding weirs/structures associated with stream crossings.

APPROVED means as stated in the contract, specified in the design, or verbally agreed upon by contract manager. **Y** = Yes - as approved, no deviations. **P** = Partially - minor deviations/deficiencies, include comment. **N** = No - not as approved, include comment. **D** = Don't know - answer unknown and cannot be found; preferable to blank. **A** = Not Applicable - the question or sub-question does not pertain to feature or the component in question was not part of the approved contract.

See Manual Part IX and VII for guidance. See below for 3-letter code key; see glossary for definitions.

THE FEATURE LOCATION MUST BE DESCRIBED USING THE PROTOCOL FOR DOCUMENTING THE LOCATION OF HABITAT RESTORATION FEATURES. IF PRE-TREATMENT MONITORING HAS BEEN COMPLETED, DELINEATE THE PERIMETER OF EACH FEATURE THE SAME WAY WHENEVER POSSIBLE, EXPLAIN NECESSARY CHANGES.

STRUCTURE INSTALLATION ***questions refer only to barrier modification structures such as fish ladders, tide gates and grade control or back flooding weirs constructed in conjunction with a fish passage improvement project.*** *If no structure was installed, answer **A** to questions in this section.*

1. **Does the structure meet design specifications?** Refer to engineering designs or accepted CDFG specifications.
2. **Was the structure installed in the approved location and position?** Refers to location of the structure along the channel and the lateral position in the channel.
3. **Were approved materials used for the structure?** Refers to using materials of approved type, quality and origin.
   a. Materials used: List materials actually used to construct the feature. Enter all that apply.
4. **Were the approved sizes of materials used for the structure?** Refers to sizes of materials used compared to those specified in contract or design specifications.
5. **Was structure anchored as approved?** Refers to anchoring methods specified in contract or design specifications.
   a. Anchoring method: Refers to anchoring method(s) actually used. Enter all that apply.
6. **Are problems with the structure visible?** Refers to visual evidence of structure malfunction or lack of structural integrity. If yes, answer sub-question.
   a. Type: List actual problems. Enter all that apply.
7. **Structural condition:** Specify the current structural condition of feature. *EXCL* = (Excellent) The treatment is intact and structurally sound. *GOOD* = the treatment is intact and generally sound but some wear or undermining is evident. Components may have shifted slightly, but the treatment is intact. *FAIR* = the treatment position or condition has been altered significantly. *POOR* = the treatment is visible but has suffered significant movement or damage. *FAIL* = (Fail) The treatment is not visible or remnants are not in any form of designed configuration. (To be better defined)
8. **Does fish passage rely on a functioning back flooding weir or weirs?** Y if the back-flooding weir is essential to the fish passage design. N if there is a weir but it is not essential for fish passage. A if there is no back-flooding weir.

BARRIER ***questions refer only to the removal or modification of a natural or other non-culvert fish passage barrier. Please verify that diagrams/photos/descriptions to document the removal or modification are available to CDFG.***
*If there was no barrier removal or modification, answer **A** to questions in this section.*

9. **Was the barrier removed as approved?** Refers to a barrier that is completely removed.
10. **Was the barrier modified as approved?** Refers to a barrier that is not completely removed but is physically modified in some way.
    a. Are there visible problems with the modified barrier? If Y, comment. Refers to visual evidence of problems related to the modified barrier. If yes, describe problems in comments.

CHANNEL ***questions refer to the stream channel up and downstream of the former barrier.***

11. **Was the channel adjacent to the barrier excavated to a stable shape?** Refers to sediment trapped in the channel as a result of a fish passage barrier. If there was no excavation, enter A.
    a. Location of excavation relative to barrier.

Instructions for FISH PASSAGE IMPROVEMENT at BARRIERS - IMPLEMENTATION checklist (pg 2)

12. **Was all fill and trapped sediment in the channel removed or stabilized?** Refers to sediment trapped in the channel as a result of a fish passage barrier and any treatment designed to control the volume of sediment released or the rate of sediment release.
    a. If not, were measures to control sediment release applied as approved.
13. **Did channel conditions at the crossing require grade control weirs/structures?** Refers to any structure prescribed to control channel bed elevation as part of a barrier modification or structure installation.

Performance measures are* REQUIRED *for permit reporting.

14. **Length of habitat made accessible: (mi)** Mandatory performance measure. Answer based on best information available, in miles. See Manual IX-45 for guidance.
15. **Length of aquatic habitat disturbed at the feature: (ft)** Permit reporting requirement. Measure the length of stream channel disturbed during construction, in feet.
16. **Area of structure or treatment within bankfull channel: (ft^2)** Permit reporting requirement. Estimate the area of stream channel, within the bankfull width, that was treated or disturbed during implementation.

IMPLEMENTATION *questions are feature specific.*

17. **Does the feature meet design, contract & permit specifications?** Standard CDFG approved design referenced in contract or another design described in the contract. If not answered Yes, a comment and appropriate documentation of deviation from the approved design are required - whether the change is beneficial or detrimental.
    a. If not, were modifications beneficial to performance? A if implemented as approved.
    b. Is non-compliance significant enough to jeopardize performance? A if implemented as approved.
    c. Are corrections needed? Y or P if the contractor will be asked to make the corrections. A if implemented as approved.
18. **Would a different treatment or design have been preferable?** Yes to this question will be given serious consideration and requires a comment.
19. **Feature Implementation Rating:** Rate the implementation of the feature, not the structural condition. Use the following definitions and rate according to how well the contract was executed and how closely the as-built matches the design. (To be better defined)

- *EXCL– (Excellent)* Installation of the project feature meets all requirements.
- *GOOD* –There are some deficiencies in the project feature, but these will not affect its overall effectiveness. Deficiencies are not enough to lead to failure.
- *FAIR* – There are some deficiencies in the project feature, and these may cause problems in the future. Some characteristics of project feature, although not enough to cause corrective action at this time, require further scrutiny. The feature will probably hold up.
- *POOR* – Implementation was not done correctly. There are deficiencies in the project feature, and these are enough to cause problems in the future. Remedial action is required.
- *FAIL – (Failed)* Implementation was not done correctly or was not implemented at all. Deficiencies in the project feature have already caused enough problems that its objectives will not be met. Remedial action is required.

Code definitions

ANC	Anchor failure
BUR	Buried or "keyed in"
BBB	Buried by bedload
CBL	Cabled
CRF	Cable/rebar failure
CON	Concrete
DNS	Downstream
MAT	Structure material failure
MTL	Metal
NON	None
NTR	Native rock
OFR	Off-site rock
OTH	Other
PLA	Plastic
REB	Rebar
SHF	Structure shifted
STK	Staked
STR	Stranded out of active channel (horizontally)
SWA	Stranded out of water (vertically)
TIE	Tied
UND	Undercut/undermined
UNS	Undersized/under-built
UPS	Upstream
WOO	Wood
WSH	Washed out