# Instructions for June 2006 Draft PRE-TREATMENT checklist IN – **INSTREAM HABITAT RESTORATION**

***May be used for features with dual goals of instream habitat restoration and bank stabilization***

**Yes** = the question applies and the answer is yes, comment if needed. **Partially** = cannot be answered definitively yes or no, comment suggested. **No** = the question applies and the answer is no, comment if needed. **Don't know** = answer unknown and cannot be found; preferable to blank. **Not Applicable** = the question does not apply to the feature or the component in question was not part of the approved contract. Also for sub-questions when the primary question was answered A.

See below for definition of all 3-letter checklist codes.

*See Manual Part III for guidance. See below for 3-letter code key; see glossary for definitions.*

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THE **"TREATMENT AREA"** MUST BE IDENTIFIED USING THE PROTOCOL FOR DOCUMENTING THE LOCATION OF HABITAT RESTORATION FEATURES. IT IS ESSENTIAL THAT SOMEONE CONDUCTING POST-PROJECT MONITORING BE ABLE TO RELOCATE THE SAME SECTION OF STREAM WHERE THE FOLLOWING DATA WERE COLLECTED.

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**HABITAT *questions should be answered regardless of goals.***

1. Meander measurement of the length of stream proposed to be treated. Targeted "treatment area" is the area intended to be treated, i.e. the structure site plus the area over which you expect to see onsite effects. For instream structures, it will be the structure site and associated habitat area. This may or may not be the length of the "habitat unit" where the feature will be placed. For example, if a single log structure will be installed in a 100-foot long run, but is only intended to convert 25 feet of channel to a pool, the targeted "treatment area" would be 25 feet. If a feature also intends to stabilize a bank, the length will include the bank to be stabilized. If the feature only intends to increase shelter, it is recommended that the treatment area be the habitat unit. A narrative description of the treatment area in relation to the proposed structure location is a suggested comment.
2. Level II habitat type in treatment area prior to project implementation. If the treatment area is on a side channel or is dry at the time of evaluation, enter the level II habitat type and OTH with a comment.
3. Measure the residual water depth to the tenth of a foot for *all* habitat types, not just pools. This is the maximum water depth in the treatment area minus the depth of the nearest downstream tail crest. For habitat types other than pools, this may be a significant distance from the treatment area. However, it is an important measurement so comparisons can be made regardless of stream flow level. Record in the comments the approximate location of maximum depth (e.g. Max. at base of LBK bedrock.).
4. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
    a. Enter only one targeted habitat type specified in the project description or contract.
5. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
    a. Enter the minimum targeted depth specified in the project description or contract. If not specified, enter D.

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**SHELTER *questions pertain to features intended to affect instream shelter. Collect baseline data regardless of goals.***

6. Use the table to the right to determine the shelter complexity value in the treatment area.
7. Estimate the percent of the targeted treatment area covered by instream shelter using DFG habitat typing methods.

**Instream Shelter Complexity Value Examples**
**(DFG Restoration Manual pg III-43)**

**Value 0**
- No shelter.

**Value 1**
- One to five boulders
- Bare undercut bank or bedrock ledge
- Single piece of large wood (>12" diameter and 6' long) defined as large woody debris (LWD)

**Value 2**
- One or two pieces of LWD associated with any amount of small wood (<12" diameter) defined as small woody debris (SWD)
- Six or more boulders per 50 feet
- Stable undercut bank with root mass, and less than 12" undercut
- A single root wad lacking complexity
- Branches in or near the water
- Limited submersed vegetative fish cover
- Bubble curtain

**Value 3**
Must have a combination of at least 2 of the following cover types:
- LWD/boulders/root wads
- Three or more pieces of LWD combined with SWD
- Three or more boulders combined with LWD/SWD
- Bubble curtain combined with LWD or boulders
- Stable undercut bank with greater than 12" undercut, associated with root mass or LWD
- Extensive submersed vegetative fish cover

## Instructions for INSTREAM HABITAT RESTORATION – PRE-TREATMENT checklist (pg 2)

8. Enter both the 1st and the 2nd dominant shelter component in the proposed treatment area (e.g. BUB / LWD).
9. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
    a. Enter the minimum targeted shelter rating specified in the project description or contract. Enter the minimum targeted shelter rating specified in the project description or contract. The shelter complexity value is multiplied by the percent shelter cover to calculate the shelter rating (0-300). If not available, enter D.
10. Count the amount of large woody debris in the targeted treatment area in the two specified size classes. The first entry is for logs with a diameter of at least one foot that are between 6 and 20 feet in length, the second for logs with a diameter of at least one foot that are over 20 feet in length (e.g. 1 / 4).
11. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.

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**SUBSTRATE** ***questions should be answered regardless of goals.***

12. Enter the 1st and then the 2nd dominant substrates in the proposed treatment area (e.g. GRV / COB).
13. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
    a. Enter the 1st and then 2nd targeted dominant substrates specified in the project description or contract. If not available, enter D.

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**CHANNEL** ***questions should be answered regardless of goals.***

14. List all channel problems near the proposed treatment area, not at a stream or reach level. List all that apply. Record problems even if they are irrelevant to the project goals.
15. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
    a. List all targeted or desired channel conditions specified in the project description or contract.

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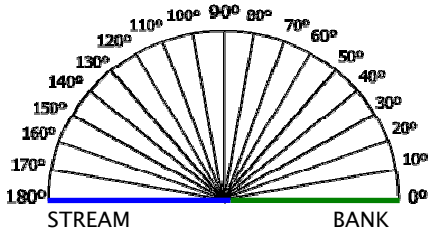
**BANK** ***questions should be answered regardless of goals.***

16. Look for evidence of active erosion in or adjacent to the targeted treatment area.
    a. Location of erosion upstream and/or downstream of the feature AND left and/or right bank (looking downstream) relative to the proposed structure location.
    b. Determine using visual evidence and knowledge of land use and erosion processes.
17. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
18. A specific goal stated in the contract, proposal or verbalized by project proponent or contract manager.
    a. The average bank angle at the proposed treatment site will be reported in departure from horizontal with 0° on the bank, regardless of which bank. A vertical bank is 90°. A 1:1 slope is 45°. A 1½ : 1 slope is 33.69°. And, a 2:1 slope is 26.65°. For undercut banks, also record the horizontal distance undercut to the tenth of a foot in the comments. Describe K. Vyverberg's folding rule/protractor method of bank measurement when available.
    b. Enter the targeted bank angle, reported in departure from horizontal, specified in the project description or contract. If not available, enter D.

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**Pre - Code Key**

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|---|---|---|---|---|---|---|---|
| AGG | Aggradation | FLT | Flatwater | POO | Pool | SWD | Small woody debris |
| ANC | Anchor failure | FPD | Floodplain deposition | RBK | Right bank | | |
| BAR | Lack of stabilizing vegetation | GRC | Grade control | RIF | Riffle | TOG | To grade |
| | | GRV | Gravel | RTW | Rootwad | UCB | Undercut bank |
| BBB | Buried by bedload | GRZ | Grazing/grazing animal | SCU | Side cutting | UND | Undercut/ undermined |
| BED | Bedrock | HDC | Headcut | SHF | Structure shifted | | |
| BOL | Boulder | HYD | Hydrologic processes | SIN | Sinuosity | UNS | Undersized/ under-built |
| BRD | Braiding | INC | Incision | SLC | Silt/clay | | |
| BUB | Bubble curtain | LBK | Left bank | SND | Sand | UPS | Upstream |
| CNR | Concentrated runoff | LWD | Large woody debris | SPN | Spanning | USG | Unstable soils/ geology |
| COB | Cobble | MAT | Material failure | STB | Stability | | |
| CRF | Cable/rebar failure | MDC | Mid-channel | STR | Stranded out of active channel (horizontally) | VEG | Vegetation |
| DNS | Downstream | MIG | Lateral migration | | | WID | Widening |
| Dry | Dry | NAR | Narrowing | STT | Straightening | WIN | Within |
| EMG | Emergent groundwater | NON | None | SWA | Stranded out of water (vertically) | WSH | Washed out |
| FLO | Flow obstructions | OTH | Other | | | | |