

Stream Mitigation Considerations

Action ID: SAW-_____

Project Name: _____

County: _____

Location: _____

Lat/Long (dec deg): _____ / _____

Stream Order(s): _____

Ecoregion (Per Griffith, et. al. 2002): _____

Required attachments:

- ☐ LiDAR map of site
- ☐ USGS 7-Minute Quadrangle
- ☐ WebSoil Survey of site
- ☐ Most recent Google Earth photo of watershed

Prepared By: _____

Date

I. Introduction

- ☐ COLDWATER
- ☐ COOLWATER
- ☐ WARMWATER
- ☐ **COASTAL PLAIN** (See III.C. below, and most current version of the Coastal Plain Stream and Riparian Area Mitigation Guidelines.)

A. Is a **permit required** to construct this project?

YES / NO

Type: _____

B. Type of proposed project (check all that apply / See 33CFR Part 332.2 for definitions):

- ☐ Re-establishment
☐ Rehabilitation
☐ Enhancement
☐ Establishment
☐ Preservation

C. **NCSAM** Stream Category: _____

D. Is there a **Wetland** component to the project? **YES / NO**

NCWAM Wetland Type _____

E. Will **Threatened or Endangered Species** or designated **Critical Habitats** be impacted? **YES / NO**

F. Will **Essential Fish Habitat (EFH)** resources be impacted? **YES / NO**

G. Will **Anadromous Fish** or similar aquatic species be impacted? **YES / NO**

H. Do any **Cultural Resource** issues exist on the site? **YES / NO**

I. Do any **Haz/Tox** issues exist on the site? **YES / NO**

J. Has a **Jurisdiction Determination** been undertaken on the project site? **YES / NO**

II. Foundation of the Mitigation Plan

A. Describe project **GOALS**: _____

B. Was an **NCSAM/NCWAM** analysis undertaken? [Attach Report(s)] **YES / NO**

Describe the site's compromised function(s): _____

List project target **FUNCTIONS**: _____

Are the above SMART - Specific/Measurable/Attainable/Reasonable/Trackable? YES / NO

III. Design Considerations

A. Describe how the **4 Dimensions of Stream Dynamics** were considered in the plan:

1. **Longitudinal** (Upstream/downstream)_____

2. **Lateral** (Side to side)_____

3. **Vertical** (Hyporheic zone)_____

4. **Temporal** (Life of project/Adaptive Management)_____

B. Describe proposed **Buffer Area** (location, size, maintenance plan): _____

C. Coastal Plain Stream Projects: Have the following coastal plain design factors been considered and applied in the mitigation plan: **YES / NO**

- Alluvial (not Colluvial or Bedrock)
- Sand Bed
- Unconfined valley
- Low energy
- Low slope
- Reach types: Braided and Regime Reach
- Pool types: Scour (Eddy and Lateral), Dammed backwater and Abandoned Channel

Other important design elements to consider for all stream mitigation projects:

- The location of the impact area(s) within the Ecoregion and specific watershed
- The location of the compensatory mitigation project within the Ecoregion and specific watershed
- Is the proposal a stream project, a wetland project – or both?

Describe how the above factors have been applied to the project design: _____

D. Proposed STRUCTURAL elements of the project:

1. **Reference Reach/Ecosystem** evaluated, surveyed and report prepared? **YES / NO**

Describe comparison between the RR and the Mitigation Site: _____

2. **Natural Channel Design** proposed and appropriate? **YES / NO**

Describe: _____

3. **Vegetation** planting component proposed? **YES / NO**

Describe: _____

a. Are plantings listed to species? **YES / NO**

b. Are local (200 miles north/south) propagules to be planted and **verified by nursery certificate**? **YES / NO**

c. Have diversity and density of species within the Reference Ecosystem been considered in the plan? **YES / NO**

d. Has consideration been given to planting the wetland/upland interface with suitable transition zone species? **YES / NO**

Describe the planting Quality Control Plan: _____

4. Site **Soils** confirmed? **YES / NO**

a. List Soil Series and Textures: _____

b. Are soils types appropriate for the target stream/adjacent wetlands? **YES / NO**

Describe: _____

c. Fertility sampling undertaken in the reference area? (Attach Report) **YES / NO**

d. Fertility sampling undertaken in the mitigation site? (Attach Report) **YES / NO**

e. Are the fertility results within the standards for the plantings? **YES / NO**

Describe results/amendments required: _____

5. If **PC Cropland**, has site been evaluated for plow pans, field crowns, tile drainage system?
YES / NO

Describe findings: _____

6. Is disking proposed after grading and/or prior to planting? **YES / NO**

Describe: _____

7. Is there a **Grading Plan**? **YES / NO**

Describe: _____

8. Hydrology.

- a. Was a **Water Budget** prepared for low, average and high conditions per WETS data?
(Attach Report) **YES / NO**

Describe and justify type of water budget model used: _____

- b. List the site's hydrologic inputs: _____

- c. For groundwater driven systems, monitoring wells are required to be installed and maintained pursuant to the most recent ERDC Technical Note. Describe type of wells and maintenance plan: _____

d. For surface water driven systems, flood gauges are required to be installed. Describe type of gages and maintenance plan: _____

e. Is the hydrologic regime predicted by the water budget appropriate for the target stream and any adjacent wetlands? **YES / NO**

Are the above SMART? YES / NO

IV. Performance Criteria

A. **Vegetation:** _____

B. **Hydrology:** _____

C. **Soils:** _____

Are the above SMART? YES / NO

V. Monitoring

A. Name and telephone number of person responsible for the success of this project:

B. Describe **Vegetation** monitoring plan: _____

Number of plots: _____

C. Describe **Hydrology** monitoring plan: _____

Number of wells / gages: _____

Describe how water flow will be measured? _____

Are the above SMART?	YES / NO
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D. **As-Built Report** to be submitted within 30 days of project construction? **YES / NO**

E. Date **Annual Monitoring Reports** to be submitted: _____

VI. Consideration of Factors of Failure

A. Describe how the following have been considered for this project:

1. **Elevations**/biological benchmarks: _____

2. Provisions for **Drainage**: _____

3. **Erosion**: _____

4. **Human Impacts**: _____

5. **Noxious species** invasion: _____

6. **Herbivory**: _____

7. **Beaver Impacts**: _____

B. Are **persistent earthen features** proposed for the **Wetlands** component of the project?
(Berms, dikes, excavated areas with spoil placed within the project site, etc.) **YES / NO**

Describe/Justify: _____

Are the above SMART? YES / NO

VII. Site Management

A. Describe **Adaptive Management** strategies: _____

B. Describe **Final Disposition** of the property: _____

C. Name and phone number of person who will manage the site after the mitigation effort is deemed successful?

D. Describe proposed **Financial Assurances**: _____

E. Describe analysis and consideration of potential upstream and adjacent changes in land use:

NOTES: _____

****Highlight and address all problems and/or inadequacies
with the proposal as indicated by this checklist****