Plan Review Checklist

FOR EROSION AND SEDIMENT CONTROL PLANS

_____ **Minimum Standards** - All applicable Minimum Standards must be addressed.

- All minimum Standards must be adhered to during the entire project regardless of the phasing.
- Request for a Variance should be addressed

NARRATIVE

_____ **Project description** - Briefly describes the nature and purpose of the land-disturbing activity, and the area (acres) to be disturbed.

- What time of year will the project start and finish? (Construction sequence)
- How long will it take to complete the project?
- How many acres will be disturbed for completion of this project?
- How much impervious area will the project have in post-developed conditions?
- What will be the ultimate developed conditions of the site?

_____ **Existing site conditions** - A description of the existing topography, vegetation and drainage.

- Should list percentages of slope on the site
- Types of existing vegetation that can he used as erosion control, or areas to be left undisturbed.
- Discuss marking of areas where existing vegetation is to be preserved.
- Discuss size of drainage areas in pre-development and post-development conditions.
- Discuss any existing drainage or erosion problems and how they are to be corrected.
- Discuss orientation of slopes (north or south facing).
- Discuss how existing site conditions can be used to reduce the potential for erosion and how proposed E&S controls will be designed to fit the site
- Photographs?

_____ **Erosion and sediment control measures** - A description of the methods which will be used to control erosion and sedimentation on the site. (Controls should meet the specifications in Chapter ***3.)***

- List all controls used, list specification numbers ***(3.02)*** location of practice.
- Discuss why it was selected.
- Sequence of installation, maintenance and removal for each control.
- Discuss temporary seeding as a means of erosion control; list the types to be used

_____ **Permanent stabilization -** A brief description, including specifications, of how the site will be stabilized after construction is completed.

- Final stabilization needs careful review.
- Is the timing of seeding correct with the construction sequence?
- List soil testing requirements
- Provide seeding specifications (pure live seed minimums), fertilizer and liming specifications. Seeding tables and rates.
- Is the type of permanent vegetation appropriate for the site'?
- Discuss all other areas to be stabilized other than vegetation (gravel, paved etc...)

_____ **Stormwater runoff considerations** - Will the developed site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff

- Discuss how (downstream properties and waterways will be protected (basins, channel improvements, easements)
- Discuss how increased runoff will be managed during construction
- List or discuss all other references for design of permanent facilities.

_____ **Calculations** -Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pm- and post-development runoff.

- All calculations showing pre—development and post—development runoff should he provided. Worksheets, assumptions and engineering decisions should be clearly presented to assist the plan reviewer in his or her duties.
- Calculation methods should be clearly presented and organized.
- Have the calculations shown that adequate protection of down—stream properties and waterways arc protected?

_____ **Adjacent areas** - a description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.

- The potential for off-site damages must be considered and discussed
- ANY environmentally' sensitive areas should be mentioned.
- Other private or public lands adjacent to the site should be described and considered for possible problems during and after construction (traffic problems, dust control, increases in runoff etc...)
- Discuss perimeter controls to be used.

_____ **Off-site areas** - Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.). Will any other areas be disturbed?

- Any off-site borrow or spoil areas should have an approved plan to supplement the overall project plan.
- If off-site areas are under other permits, proof of permits should be provided.
- List specific locations of all off-site areas
- Discuss who will be responsible for final stabilization and maintenance of off-site areas.

_____ **Soils** - A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.

- Indicate references for soil information
- Provide a copy of soil survey map
- indicate what sheet of site plan soils are delineated
- Check for soils with a high K factor, or poor drainage, low pH etc...

_____ **Critical areas** - description of areas on the site which have potentially serious erosion problems (e.g., steep slopes, channels, wet areas. streams. underground springs, etc.).

- Discuss any' area of the project which may become critical during the project. Some areas of the site may have long or steep slopes during a certain phase of the grading.
- Indicate areas to he left alone until they can be graded and stabilized in favorable conditions.
- Discuss precautions to communicate limits of these areas to contractors and equipment operators.

_____ **Maintenance** - Schedule of maintenance for permanent storm water control

measure should he provided.

- Should list who is responsible during construction and who will be responsible once the project is complete
- Should provide a schedule of inspections to be conducted
- List maintenance items to check and perform as well as precautions for large storm events

Checklist (continued)

SITE PLAN

_____ **Vicinity map** - A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.

- Provide a reproduction of a topo map, road map etc.

_____ **Indicate north** - The direction of north in relation to the site.

- Useful tool for determining slope orientation
- Useful for communicating written inspection reports and plan review comments
- Useful predicting areas off—site that might he effected by dust drift

_____ **Limits of clearing and grading** - Areas which are to be cleared and graded.

- Show all areas to be disturbed on the site plan
- Provide notes on how areas will be marked
- Provide notes and illustrations to clearly indicate areas NOT to he disturbed

_____ **Existing Contours** - The existing contours of the site.

- Should be shown as dashed light lines in intervals from 1 to 5 feet.
- Represent pre-developed drainage areas (check these areas for accuracy)
- Show potential critical areas (slopes)
- Helps to determine cut or fill areas, low spots
- Helps to determine E & S controls have been designed properly.

_____ **Final contours** - Changes to the existing contours. Including~ final drainage

patterns.

- Should be shown as heavy solid lines
- Determines final drainage areas
- Check to see if pro-developed drainage areas have increased
- Check final grade of slopes to see if they will become critical (may need diversions or flumes)
- Check vegetative specifications for final grade of slopes (low or high maintenance). Are erosion controls blankets needed?

_____ **Existing vegetation** - The existing tree lines, grassed areas, or unique vegetation.

- Clearly indicate existing tree lines, vegetation areas to remain
- Provide notes on the plan for areas to be undisturbed

_____ **Soils** - The boundaries of different soil types.

- Indicate soil boundaries of all soil types on the site. List K factor and soil survey classifications.
- Provide notes 01 soil properties (texture, etc...)

_____ **Existing drainage patterns** - The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.

- Should be indicated by acres arid show the direction of flow for all existing drainage areas.
- Indicates the need for basins, traps or other structural measures
- Helps to determine if controls are designed correcting'
- Helps to determine if off-site drainage needs to be diverted
- Useful in planning to break up drainage areas into smaller more manageable areas during construction

_____ **Critical erosion areas** - Areas with potentially serious erosion problems.

- All critical, environmentally sensitive or prohibited areas should ho denoted on the plan and notes provided to state reasons for critical nature
- Stream considerations; temporary crossings, other permits, location of stock piles, trash & debris removal, fuel storage, etc.

_____ **Site Development** - Show all improvements such as buildings, parking lots, access rums, urn in: construction, etc.

- All improvements such as building, roads, temporary~ access roads, right—of—ways and temporary easements should be shown on the plan.
- Utility improvements on and off-site should be shown.

_____ **Location of practices** - The locations of erosion and sediment controls and stormwater manage meat practices used on the site. Use the standard symbols and abbreviations in Chapter *3* of the VESC handbook.

- The exact location of all practices including vegetation should be clearly shown on the plan.
- A legend denoting symbols, line uses and other special characters should be provided

_____ **Off-site areas** - Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)

- Are separate plans required for off-site borrow or disposal areas?
- How will off-site areas be stabilized?
- Are there any temporary easements to be disturbed during construction?
- Who has final responsibility for off-site areas?

_____ **Detail drawings** - Any structural practices used that are not referenced to the E&S handbook or local handbooks should be explained and illustrated with detail drawings.

- Details should be provided which are clearly dimensioned and reflected the ability to be ~~built" in the field according to the proper design criteria.
- Alternative E&S measures must have proper drawings to indicate how and where they are to be constructed.
- All plan drawings, elevations and cross section drawings should show scales used to prepare the drawings.
- Outlet protection schedules should be provided
- Sizes and materials should be shown for all pipes, flumes and slope drains.
- All details should list the specification number from the \~ESCI-I
- If more than one type of specification is being used (inlet protections) details of all practices shall be provided

_____ **Maintenance** - A schedule of regular inspections and repair of erosion and sediment control structures should be set forth.

- Indicate who is responsible for maintenance and repair of all E&S measures on the project (RLD).indicate who is the primary contact for emergencies s, for notification of problems (owner), etc
- Provide clean—out and maintenance specifications for all major or structures such as basins, traps, and silt fence etc.
- Require monitoring reports from the RLD if needed