

# CHAPTER 4

## LOCAL PROGRAMS: PRINCIPLES AND PROCESSES

The Erosion and Sedimentation Act of 1975 states that the governing authority of each county and municipality shall adopt a comprehensive ordinance establishing procedures governing land-disturbing activities conducted within their respective boundaries.

If counties and municipalities have failed to have in effect an ordinance conforming to the provisions of the law, then the State Board of Natural Resources will adopt appropriate rules and regulations governing activities within those areas.

The emphasis of the law is truly on implementation of *local* erosion and sediment control programs. It has been said that, "Unquestionably, local officials have the constitutional authority to make decisions concerning the use and allocation of local land and water resources. Also an erosion and sediment control program constitutes a segment of soil and water resources management which ought to be the responsibility of elected officials at the local level."(21)

### PRINCIPLES

For any erosion and sediment control *program* to become effective, there are certain principles which should be applied for maximum effectiveness.

1. Erosion and sediment control should become a stated policy of all concerned, including public and private agencies operating in or having jurisdiction within the boundaries of the unit of government. It is imperative that developers, owners of land to be developed, their designated consultants, planners and engineers become aware of the necessity for sound erosion and sediment control programs.
2. A well-planned public information and education program on erosion and sediment control is essential for public and private support.
3. Competent technical personnel knowledgeable in local soil and climatic conditions, workable procedures, and inspections are necessary for successful erosion and sediment control.
4. To be effective, provision for erosion and sediment control must be made in the planning stage. Practical combinations of the basic design principles contained in Chapter 2 should be skillfully planned and applied in a timely manner.

5. Research observations and evaluations should be conducted to provide needed information for improvement of the erosion and sediment control program. A comprehensive review and evaluation of the overall sediment and erosion control program should be conducted at least every few years.

### PROCESSES

An erosion and sediment control program may be subdivided into four basic processes:

- a. ordinance development and implementation
- b. plan preparation and review
- c. inspection and enforcement
- d. information, education and training

### ORDINANCE DEVELOPMENT AND IMPLEMENTATION

Local officials have a working knowledge of local conditions and problems. It is they who can best implement ordinances which take local needs into account.

In the past, the cost of correcting expensive sediment damages has often been the responsibility of local units of government. Therefore, it is advisable that local governments have direct control over the enforcement of laws pertaining to erosion.

Although the direct responsibility for drafting ordinances falls on local officials, citizen participation should be encouraged to insure that the final product will reflect their needs and wishes.

A model ordinance has been developed by the State Soil and Water Conservation Commission for use by officials in municipalities and counties. The model is intended primarily to provide guidelines for control of *urban* soil erosion and sediment pollution. It is designed to meet state requirements for establishing programs as required in Act 599. A copy of the model is contained in Appendix D of this manual.

Preceding the body of the model ordinance is a brief explanation of the contents. This explanation is intended to clarify certain sections or phrases contained in the model. Opinions expressed therein are not necessarily requirements to be fulfilled. Local authorities may wish to develop individual ordinances from the wealth of comprehensive material available for this, or they may utilize another of the models available. Regardless of the method used, the contents of the model ordinance should be tailored to fulfill specific needs of the local governing authority. A review of the final draft by the county or city attorney should be mandatory.

The adoption of an ordinance should be considered as only the first step toward a sound soil erosion and sedimentation control program. It is essential that sufficient lead time be provided for education of the public and technical training of persons directly involved in its full implementation.

## PLAN PREPARATION AND REVIEW PROCESS

All parties involved in the plan development and review process must realize without exception that there is more *than one approach* to minimizing erosion and sedimentation damages. Flexibility without compromising the primary objective must be encouraged to arrive at a common solution to erosion and sediment control problems on any given site. All available resources should be explored. Local officials should plan to provide assistance to the developer and his consulting planners and engineers prior to plan submission before plan processing can be effective. Assistance from federal and state agencies having expertise in the field of soil and water conservation should be provided to the developer and his consultant. Developers may benefit by entering into an agreement for assistance through their Soil and Water Conservation District. Technical expertise can then be provided by federal and state agencies.

The erosion and sediment control plan should be submitted as early in the planning stage as possible. The plan itself should embrace all aspects of the requirements of the basic design principles as specified in Chapter 2 of this manual. In addition, practical combinations of vegetative and structural conservation practices should be designed in accordance with the minimum requirements of the Standards and Specifications contained in Chapter 6.

It is recommended that the plan review process be broken down into the preliminary planning phase and the final design phase to reduce costly engineering fees. Such fees are normally considerably higher than preliminary planning fees. Costs for changes to engineering drawings and specifications can be prohibitive. An early, or first phase, submission of erosion and sediment control plans will promote general agreement and cooperation and provide for changes with minimum delay to the development process.

The responsibility for plan reviews has been delegated by Act 599 to the Soil and Water Conservation Districts. This does not relieve the county or municipality, however, from a responsibility to assure that plans conform to other local regulations and ordinances.

## PLAN PROCESSING

Following is a recommended procedure for preparation and processing of an erosion and sediment control plan:

1. The owner, developer, or the authorized agent for either the owner or the developer, prepares the erosion and sediment control plan. The plan is pre-

pared in accordance with the minimum requirements and recommendations contained in the Manual for Erosion and Sediment Control. (The manual should be incorporated by reference in the local erosion and sediment control ordinance.) Plans should be prepared only after consultation with the local governing authority, the Soil and Water Conservation District, and other agencies or individuals having expertise in the field of soil and water conservation.

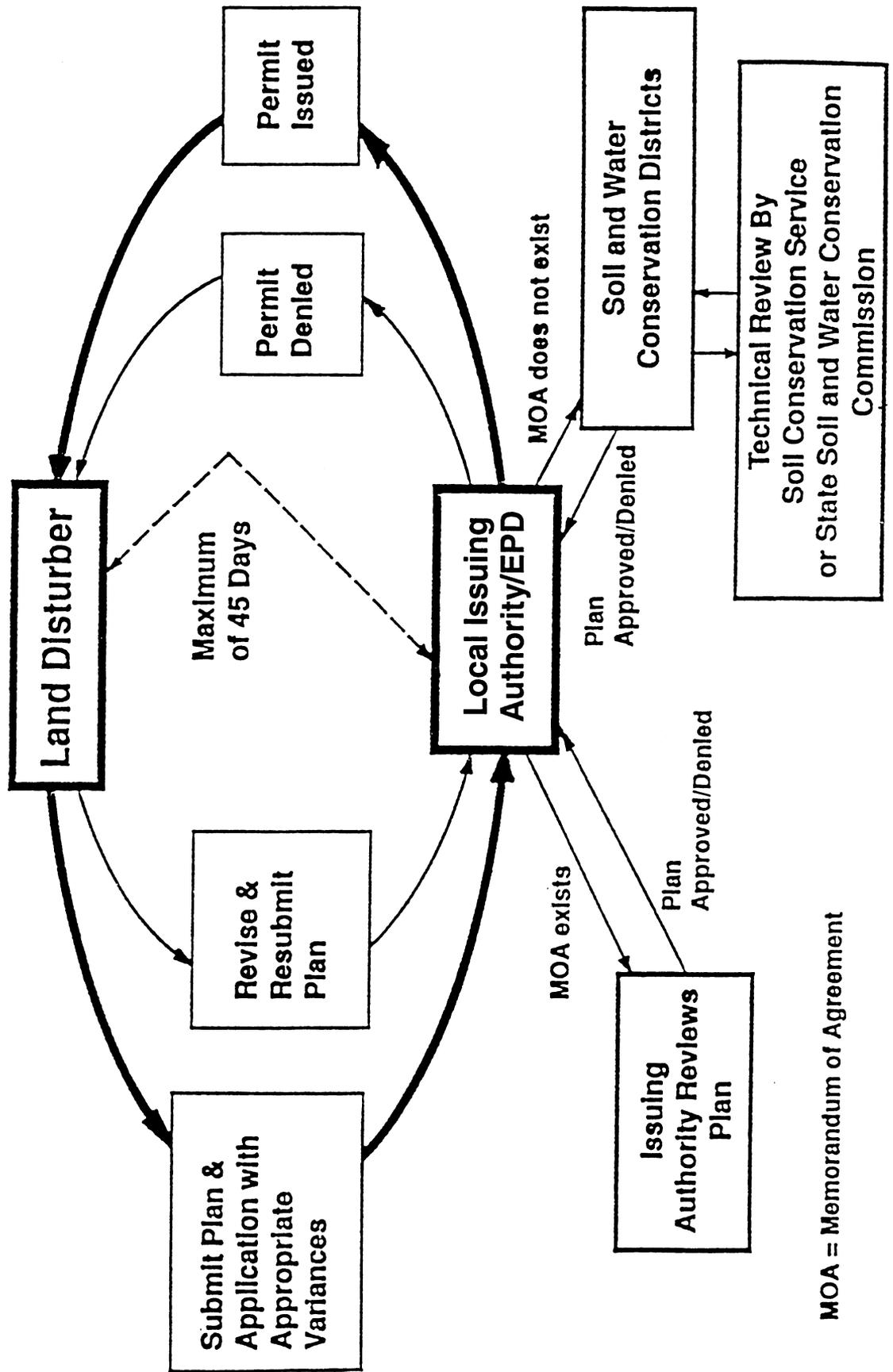
2. The owner, developer, or the authorized agent for the owner or developer, submits the plans to the local permit-issuing authority after completing an application for a permit. (Local officials should determine the number of copies of plans and applications to be submitted by the owner, etc. It is suggested that a minimum of three copies of the plan be submitted.) If an application form has not been developed by the local unit of government, a letter of transmittal containing the following information should accompany the plans.
  - a. The name, address and phone number of the applicant.
  - b. The name, address and phone number of the land owner of record.
  - c. The name, address and phone number of the person responsible for carrying out the plan.
  - d. The name, address and phone number of the person preparing the plan.
  - e. The location of the activity including land lot and tax map page numbers.
  - f. Any other information as determined by the local unit of government.

The local unit of government may require that a preliminary erosion and sediment control plan be submitted along with a preliminary site plan. The preliminary erosion control plan should not be cluttered with detailed erosion and sediment measures but should include the following information:

- a. soil boundaries of all major soil series.
- b. approximate limits of grading.
- c. tentative measures for sediment and erosion control.
- d. phasing of development to minimize area and duration of exposure of soils to erosive elements.

It is suggested that the governing authority of the county or municipality delegate the authority for receiving applications and processing permits to the county engineer, director of public works or other qualified individuals knowledgeable in the processing of site development plans. If in the ordinance the responsibilities of the governing authority are delegated to the constitutional or statutory local planning and zoning commission, then it is suggested that the plans and applications be processed by the director of the planning and zoning commission.

# Land Disturbing Activity Application and Permit Procedure



MOA = Memorandum of Agreement

3. Two copies of the erosion and sediment control plan shall be forwarded as soon as possible to the local Soil and Water Conservation District, or its delegated authority, for review. In determining the adequacy of the plan, the district officials (supervisors) will be guided by the requirements and recommendations contained in the local manual. District supervisors may request the assistance from the erosion and sediment control specialist with the State Soil and Water Conservation Commission, specialists from the district or technical personnel of the Natural Resources Conservation Service. The district supervisor, after consultation with the district board, will forward the plans and recommendations to the permit-issuing authority of the municipality or county. These recommendations should include measures necessary to meet requirements and recommendations outlined in the manual. A copy of the recommendations of the district's technical advisor may be forwarded to the permit-issuing authority.
4. The permit-issuing authority of the local unit of government, after consultation with the governing board and after a thorough review of the plan for compliance with other resolutions or ordinances rules and regulations, should then issue or deny a permit. If a plan is not approved, the modifications necessary to permit approval of the plan should be specified in writing. Time is of essence in erosion and sediment control plan processing. Act 599 states that permits shall be issued or denied as soon as practicable after the application is filed with the issuing authority—but in any event not later than 45 days of receipt of the plan and completed application.

### **Plan Revisions**

An approved plan may be revised if inspections reveal that the erosion and sediment control plan is inadequate in accomplishing the objectives of the law. If so, modifications to correct the deficiencies must have the concurrence of the plan-reviewing authority.

Revision may also be required when the person responsible for carrying out the approved plan finds that, because of changed conditions or other reasons, the approved plan cannot be effectively carried out. Again, the plan reviewing authority must give concurrence on proposed plan changes.

### **Checklist of Plan Preparation and Review**

A complete plan review checklist is presented on page 6-10. Some of the issues which the plan preparers and plan reviewers need to consider are:

1. Does the proposed plan contain information reflecting actual existing site conditions?
2. Will the roadways, buildings and other permanent features conform to the natural topography of the site?

3. Will the limitations of soils and steep slopes be overcome by sound engineering practices?
4. Will clearing be limited to only those areas of the site to be developed?
5. Will natural vegetation be retained and provisions made for protection of existing vegetation and for supplemental planting?
6. Will major land clearing and grading operations be scheduled during seasons of low potential sediment runoff?
7. Will the time of exposure of land clearing and grading be kept to a minimum?
8. Will permanent structures, temporary or permanent vegetation or mulch be scheduled for installation as quickly as possible after the land is disturbed?
9. Will all storm water management facilities, temporary or permanent, be designed to safely convey water to a stable outlet?
10. Will sediment basins, sediment barriers, and related devices be planned to filter or trap sediment on the site? Can these structures be easily maintained?
11. Will proposed vegetation be suitable for the intended use?
12. Do potential pollution hazards, including off-site sediment, noise and dust exist?
13. Are proposed permanent facilities subjected to flood or sediment damages?
14. Do subsurface conditions exist which could lead to pollution of ground water or aquifer recharge areas?
15. Is the construction schedule adequate?
16. Will erosion and sediment control measures be in place before extensive grading and clearing begins?
17. Have areas been designated for storage of salvaged topsoil?
18. Can *all* soil erosion and sediment control measures be adequately maintained?

## **INSPECTION AND ENFORCEMENT PROCESS**

With regard to the inspection and enforcement process, it should be noted that it is not the purpose of this manual to support or promulgate specific courses of action by local authorities in these areas. Except as provided by Act 599, the local authorities are expected to exercise autonomy in determining the extent of any enforcement and inspection processes. The information provided here, as elsewhere in the manual, is only in keeping with the responsibility of a publication such as this to offer, for informational purposes, the alternatives available and in no way represents official opinion or recommendation.

These responsibilities begin after the issuance of a permit for a land-disturbing activity. A crucial element in any sediment and erosion control program is adequate field inspection for evaluating compliance to the approved erosion and sediment control plan. These inspections *might* be effectively incorporated in other existing local inspection programs.

Although Act 599 specifies that the actual responsibility for inspection is that of the governing authority, on-site inspection may be assigned to a building inspector or another person employed by the local unit of government. The inspector, whether a soils engineer, civil engineer, soil conservationist, or technician, should have some knowledge in the field of soil and water conservation.

To assure that the enforcing agency and the permit applicant are in agreement about the control procedures to be followed, a pre-construction conference would be desirable. This conference should be held prior to beginning the land disturbing activity. All facets of the proposed work should be discussed at this meeting and anticipated problems reviewed. The need for installing temporary sediment control measures prior to actual clearing and grading operations should be emphasized. The individual responsible for carrying out the plan should also be informed of local inspection policies and schedules.

The institution of both scheduled and random inspections would be appropriate. The former would be a routine inspection related directly to construction operations and carried out on a rigid schedule. Random or impromptu site inspections would assure continuing compliance and the proper maintenance of erosion and sediment control measures.

The implementation of a record system would insure coordination of the inspection process with other departments and local agencies. The record system should contain a detailed filing system for all land-disturbing activities. This file should contain a record including the date of each inspection, the date land-disturbing activities commenced, and pertinent comments concerning compliance or noncompliance with the erosion and sediment control plan. In cases of noncompliance, the report should contain statements of the conservation measures needed for compliance and the recommended time in which such measures should be installed. Inspection reports should be immediately forwarded to the local governing authority.

In the event that inspections indicate a violation exists, some type of system for notifying the violator would probably be necessary. An effective system often utilized by authorities involves a written "Notice to Comply." Such a notice would describe the violation and give a detailed description of conservation measures necessary to assure compliance with the approved erosion and sediment control plan. If proper action is not taken within a reasonable time, the local governing authority could then prepare a letter of intent to utilize a performance bond, cash bond, escrow mon-

ies or other legal arrangement insuring installation of the approved measure.

The county engineer, building inspector, etc., would represent the issuing authority in handling complaints about missing or ineffective erosion control measures. When it is determined that ineffective erosion control measures are being followed but those measures comply with the approved erosion control plan, the city engineer, building inspector, etc., should notify the local Soil and Water Conservation District.

### **Checklist of Site Inspection**

The process of inspecting construction operations requires knowledge of the basic principles and control measures in Chapter 2. A thorough understanding of the erosion and sediment control plan is absolutely essential. The following checklist is supplied to assist the inspector in fulfilling his responsibilities.

1. Are all erosion and sediment control measures in place, adequate and properly constructed?
2. Have clearing operations been confined within the limits as shown on the plan?
3. Is vegetation outside of the clearing area protected? Supplemented?
4. Is sediment being transported from the site onto public right-of-way by vehicular traffic?
5. Are erosion problems present in the vicinity of temporary or permanent storm water management facilities?
6. Are sediment basins, sediment barriers and related devices effective in retaining sediment on the site?
7. Is appropriate vegetation being established as needed on the specified area?
8. Is work progressing in accordance with the proposed schedule?
9. Is the contractor following the plan and construction sequence?
10. Have temporary stream channel crossings been installed and maintained?
11. Are embankment slopes and permanent structures installed in areas subject to flood or sediment damage?
12. Has topsoil been salvaged and stored in the area designated by the plans?
13. Do severe fire hazards exist which would result in brush or grass fires?
14. Are all erosion and sediment control measures properly maintained?
15. Is excessive sediment leaving the site for any reason?
16. Have all buffers adjacent to "state waters" been honored?

### **Enforcement, Penalties, and Incentives**

For each proposed land-disturbing activity, a decision should be made on precautions insuring that conservation measures are installed. These precautions may include a cash bond, cash escrow, letter of credit, or any combination thereof. The purpose is to insure that

the planned conservation measures are installed at the applicant's expense if he fails to do it within the specified time. If a cash incentive is used, it should be required prior to commencing the land disturbing activity.

In the event that the requirements of the erosion and sediment control plans are not being fulfilled, one alternative the local units of government may consider is withholding future permits such as additional grading, building, etc., involving the particular land-disturbing site.

Local authorities may consider assessing fees for erosion and sediment control plan processing. The cost of inspection services could be recouped, if desired, by levying permit fees.

## **INFORMATION, EDUCATION AND TRAINING PROCESS**

One of the most important processes in *any* erosion and sediment control program is an effective information and education effort. A local program *must* have the acceptance and the support of those persons most affected . . . the developers, engineers, planners, and architects, as well as the general public. Without their support, effective sediment and erosion control *will not* take place. It is very important that the "conservation pays" ethic be adopted by these groups.

Each municipality and county must formulate plans for an information/education program. Consideration should be given to:

1. Informing the developer and others affected by the requirements of the local program and of the assistance which will be made available to them.
2. Training seminars, conferences and educational material for the developer, his consultants, contractors and other support personnel of the developers.
3. Training seminars for the local government personnel authorized to perform the functions of inspections and enforcement and administrative duties within the local erosion and sediment control program.

An initial training program for new employees, or personnel such as building inspectors who will have an added duty of inspection for erosion control, is mandatory. Annual refresher courses or training programs should be planned.

Assistance in planning and conducting local training programs may be obtained through the Soil and Water Conservation Districts.

**CHAPTER 5**  
Sources of Assistance  
and Resource Information