APPENDIX D

SUGGESTIONS FOR POSITIVE CITIZEN ACTION

ACTION: PROPERTY OWNERS

Land use practices on private property can greatly affect a creek. The following suggestions are easily accomplished by property owners (individuals or corporations). These suggestions should be considered by those owning land along a water course AND by those owning land in the upland. These actions refer to general creek corridor protection and water quality matters as well as to soil erosion and sedimentation control. Some apply to land being used for agricultural operations.

1. PROPERTY MANAGEMENT

- Do not fertilize lawns down to the water's edge.
- A strip of vegetation should be left as a buffer between the creek and residences. This keeps the water cool (helping to preserve coldwater fish species), prevents erosion, provides wildlife habitat and maintains the character of the creek.
- Stream crossings by livestock or horses should be avoided.
- Marshland or any kind of wetland should be left in its natural state and off limits to cattle.
- If the land next to the corridor is cropland, inorganic fertilizer should be applied in the right form at the right time; organic fertilizers should be applied when there is no danger of their being washed into the creek.
- Erosion sites anywhere on the property should be eliminated (by planting vegetation, sodding and filling, rerouting flow, building a splash apron, using barriers to slow down velocity, etc.).
- Septic tank drainfield systems should be checked every two or three years to be certain they are operating properly. The septic tank may have to be pumped out periodically in order for it to provide proper treatment.

2. PROPERTY DEVELOPMENT CONSIDERATIONS

These suggestions will maintain or enhance the value of your property and protect the creek.

- Do not disturb the creek corridor if at all possible.
- Learn about the soils of the site and the physical limitations associated with those soils.
- Implement a soil erosion control program for the site.
- If there will be more runoff water as a result of changing the use of the site, handle it by infiltration or storage and slow release.
- Be certain that the soils are adequate to accommodate a septic tank-drain field system.

3. WHERE TO GO FOR HELP

- Most counties have a Soil Conservation Service representative who can explain the nature of your soil and its best uses. Soil Conservation Districts in your county may also have an active soil conservation program which could provide information about crop and woodland management.
- Other assistance may be available from the Cooperative Extension Service, the county or state health departments, the county or township planning departments, the county drainage engineer or the state department of Natural Resources.

ACTION: CITIZENS

Local public agencies need to know what their constituents want; they need to have public input. Local policy boards need such information in order to be responsive and also to have the political support to make difficult decisions. There is a necessary role for the citizen to play when it comes to protecting creeks and the benefits they can provide. In many cases the difference between a high quality, beautiful creek and one which has become a polluted eyesore is the vigilance and concern of citizens and citizen groups. The following suggestions are essential steps in establishing a process of meaningful citizen participation.

1. DEVELOP A FACTUAL BASE OF INFORMATION

- Understand the rules of the game by which the changes that affect creeks are undertaken: know about local ordinances relating to planning and development, state legislation and, in general, the decision-making process involved in land use change.

- Survey and document the condition of the creek. Develop as much information as you can about the creek's environment. Studies or reports which may have been done by public agencies or private consultants can be helpful.

- Get to know the staff of the local, regional, state and Federal agencies which may be involved. They should be able to provide technical information and tell you which legislation applies.

2. ANALYZE THE PROBLEM AND COMMUNICATE THE PROBLEM

- Define the problem.
- What benefits are being affected?
- Who or what is responsible for the immediate problem?
- With the facts in hand let your local officials know your concerns.
- State pollution control agencies should also be contacted to determine if a violation of state water quality standards has occurred.

3. MAINTAIN A LONG RANGE PERSPECTIVE TO INSURE CONTINUING CREEK PROTECTION

- It is always preferable to prevent a problem rather than wrestle with it after it exists. The informed, active citizen or citizen group should be involved in creek protection while there is still a creek to protect.

- Cultivate a good working relationship with officials at all appropriate levels:

LOCAL LEVEL

- Local units of government have many options available.
- Local government planning commission -These groups adopt development policies and usually a zoning map with a desired land use pattern. Water resource protection is usually not fully integrated in such efforts but could be.
- Agencies responsible for drainage-The policies, operating standards and enabling legislation of these agencies can be quite important.

REGIONAL LEVEL

In most metropolitan areas there is a regional planning commission or a council of governments with a professional staff. These organizations have expertise in many areas (e.g., health, criminal justice, transportation, housing) including environmental and water resource issues. They also are sources of information and can be helpful in identifying and addressing local water resource problems. Watershed associations or councils exist in many states to promote sound water resource management, study river basin and water related problems and assist in coordinating actions of governmental units. In Michigan, watershed councils can be organized under the Local River Management Act (P.A. 253 of 1964); other states often have similar enabling legislation.

STATE LEVEL

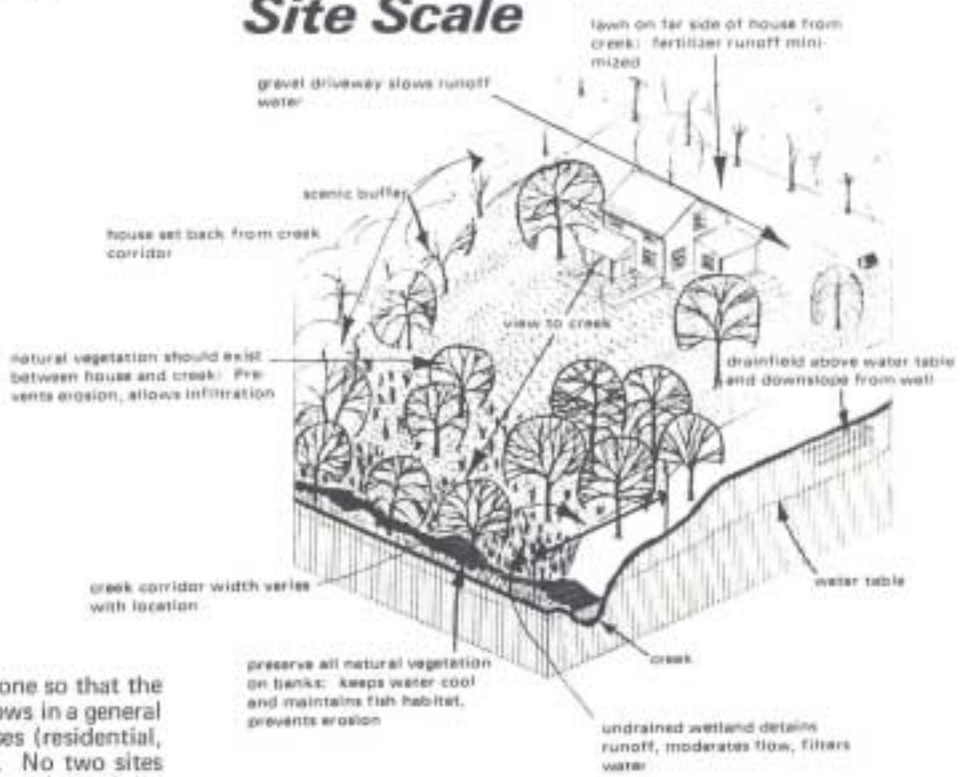
State governments are involved because of state legislation dealing with environmental protection, natural resource use or management and State water quality standards. The administration of such legislation is a stage government activity.

FEDERAL LEVEL

The most useful piece of legislation today (1974) with respect to encouraging citizen participation in water resources is based on the Federal Water Pollution Control Act Amendments of 1972. This act requires the states to permit public (citizen) review and comment on proposed pollution discharge permits. Investigate this legislation with your state water pollution control agency or the Regional office of the U.S. Environmental Protection Agency.

DESIGN SUGGESTIONS

Site Scale

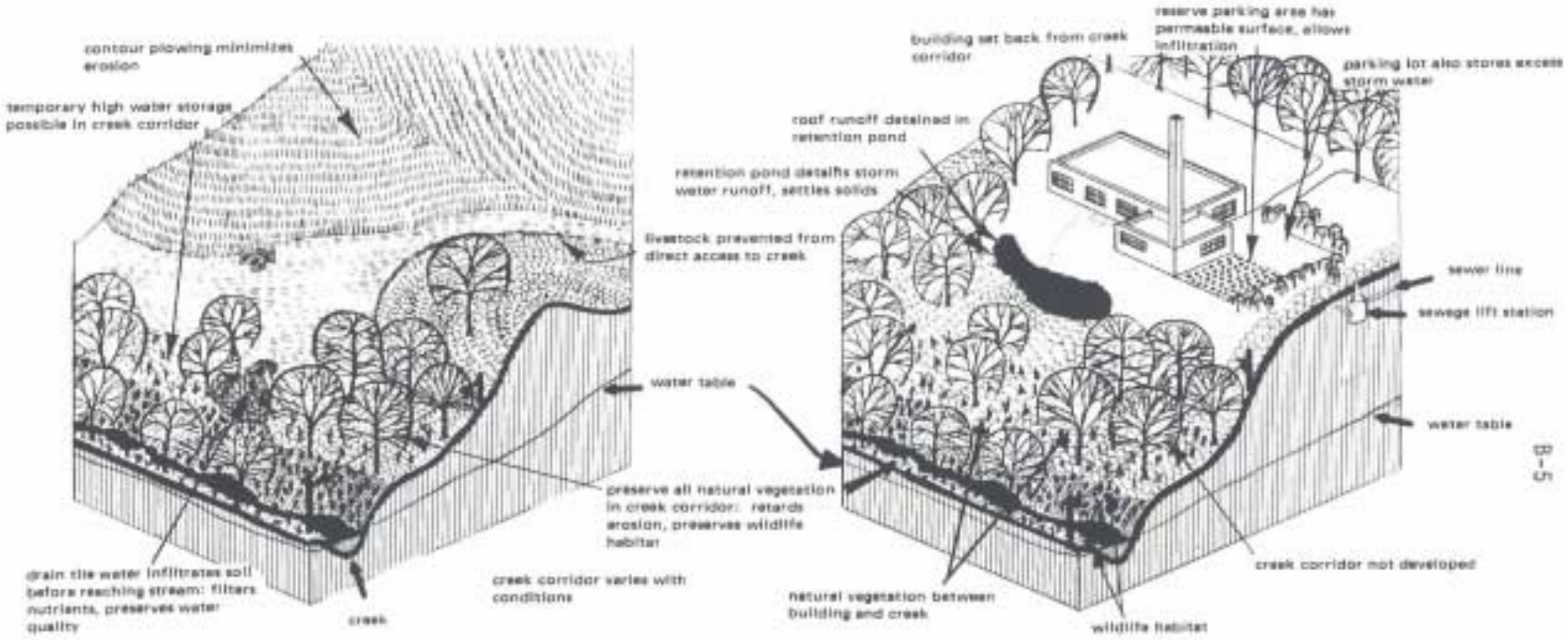


When land is developed in a creekshed it *can* be done so that the benefits of the creek are protected. This section shows in a general way what should be considered when different uses (residential, commercial and agricultural) are placed on a site. No two sites are alike, of course, so each must be analyzed and carefully planned. The sketches may not look like any creek landscape you know; they should be useful though because they highlight development techniques which respect the creek's values and sensitive features.

Design considerations for sound creekshed management at three different scales: the site, the project and the creekshed are presented here. It is important to realize that very large projects can have very large adverse impacts on a small watercourse. At this scale too, care must be taken that the physical developments undertaken by the public sector will serve to protect creek benefits and avoid future problems.

RESIDENTIAL USE

The first consideration in the site planning process should be whether *any* development is appropriate especially if the parcel is in a creek corridor. If the site has no serious physical limitations (soils, vegetation, steep slopes, wetlands for example) the development should not lower or ruin the quality of the creek related site. (At this scale the physical design of the site should include the following considerations: vegetation buffers along banks and between dwellings, runoff water stored or infiltrated on site, adequate sewage treatment which does not pollute the creek or ground water.



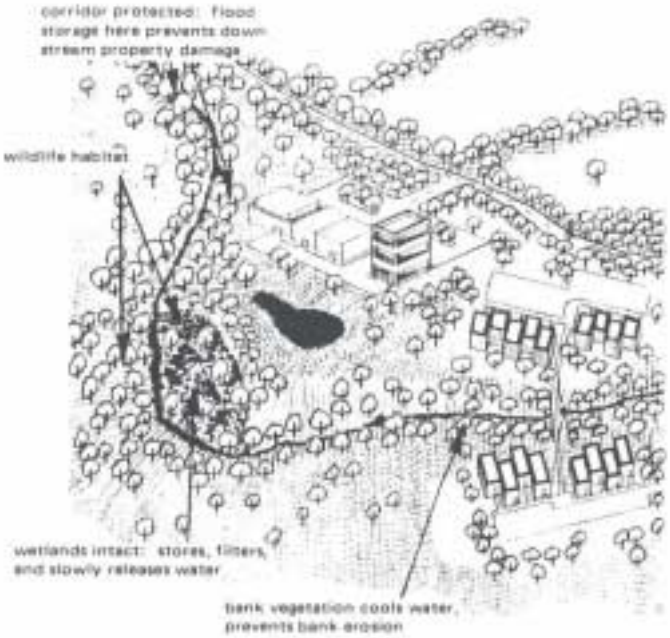
AGRICULTURAL USE

In many areas land along a creek is being used for agricultural purposes. This kind of use can also affect the creek's quality both in the immediate area and downstream. The illustration above notes some of the land and water conservation practices which are appropriate for this land use. Some of these considerations have to do with physical changes: draintile which dissipates the water before it gets to the creek, contour plowing, preservation of a vegetated buffer strip along the creek corridor, fence lines along the creek corridor if the land is grazed. Other considerations have to do with treatment of the land: when and what kind of fertilizers are applied to fields, and what kind of crop (row crop or ground-covering crop) is grown near the creek.

INDUSTRIAL/COMMERCIAL USES

These uses can generate many adverse impacts on the creek at the point where they occur as well as downstream. Such uses often have large parking areas or roof surface areas. They may require a large volume of water for manufacturing products. This suggests a need for careful analysis of: wastewater disposal methods (domestic sewage or process water), quantity of runoff generated from buildings or parking lots, setback from creek corridor to preserve scenic or natural quality, and amount, kind and placement of vegetation elsewhere on the site.

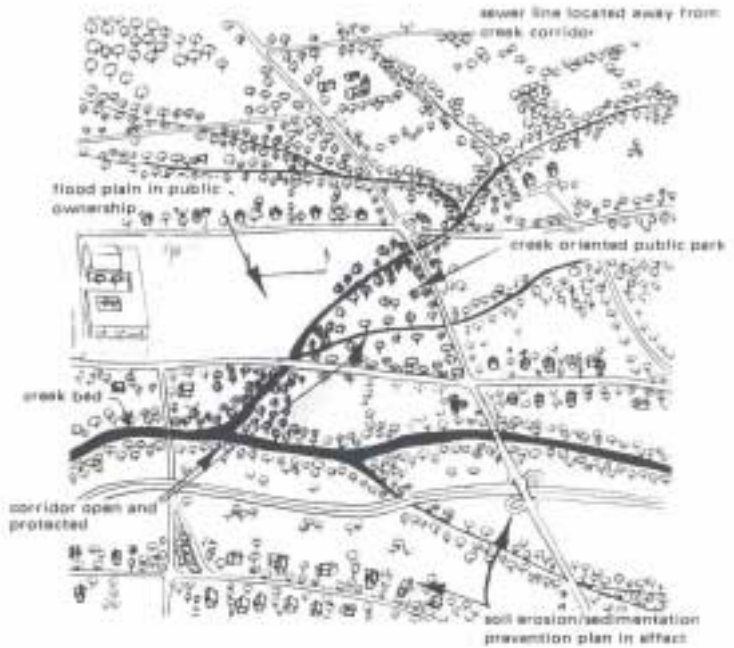
Large Project Scale



THE LARGE PROJECT SCALE

At this scale of development a much larger parcel of property is being planned or developed. Even if such a development is some distance from a creek it can still greatly affect a creek and downstream property. The following should be provided for: minimal change in the runoff rate, preservation of the hydrological function of the natural creek bed, non-degradation of land and water quality of the creek corridor during and after construction, maximum scenic enhancement and maintenance of wildlife habitat.

Creekshed Scale



THE CREEKSHED SCALE

This scale is the entire creekshed. "Good" design or "wise" land use at this scale depends upon the implementation of the measures already mentioned for the site and project plus some assurance that expenditures for public services will not result in degradation of creek benefits. At this scale the benefit realized is a smoothly functioning, high quality creek system. The units of government and communities in the creekshed can enjoy many or all of the creek's benefits (drainage, wildlife, amenity, water supply, open space and local recreation). In addition, significant savings can be realized by *not* having to pay for pollution abatement or control, or installation and maintenance of drainage "improvements". Flooding will be minimized and private property values will be stablized or increased.