

Development Plan

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Development Plan

1.0 Introduction

- ❑ For a successful town planning there must be a plan which envisages the entire town as a single unit.
- ❑ The development or expansion of a town takes a long time, and therefore, the development is required to be controlled at any time on the basis of a plan. Such a plan is called as 'Development Plan' or „Master Plan“.
- ❑ The development plan is generally prepared to improve the old conditions of the town but it is also equally necessary for the new cities to be planned and built on virgin land. e.g. New Delhi, Gandhinagar, Chandigarh, etc.
- ❑ A development plan is an ideal plan showing the full development of the town at some future date.

Development Plan

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2.0 Objectives Of Development Plan

- It arranges the **pattern of a town** in such a way so as to satisfy the present requirements **without introduction of future improvements by the coming generations.**
- Restricting haphazard and unplanned growth.
- It helps to **bring harmony** & understanding between the different groups of the people.
- It removes the defects of uncoordinated **physical growth.**
- It serves as **a guide** to the planning body for making any recommendations for public improvement.
- It stimulates wider interest in **community problems.**
- To coordinate the physical, economic, social & political forces that govern the structure of the community.
- To formulate long term & short term action programs with a view **to injecting long term considerations into short term actions.**

Development Plan

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3.0 Necessity of Development Plan

1. To control the development of various **industries** in a systematic way
2. To discourage the an used and unscientific way growth
3. It serves an overall picture and **program for the future** development
4. **To offset the evils** which have come up due to overcrowding of population such as acute shortage of houses, traffic congestion, inadequate open spaces and insufficiency in public amenities; etc.

Development Plan

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1. Data to be Collected

- Details of trades and industries
- Development of airports
- Environments of site
- Facilities of transport
- Geological conditions of the site
- Land values and land use pattern
- Locations of spots of natural beauty
- Locations of water supply units
- Meteorological details such as intensity and direction of wind, temperature, rainfall, etc.
- Mineral resources
- Places of historical origin
- Political position of the surrounding area
- Population
- Requirements for railway stations, goods yards and shipping facilities
- Special requirements for power houses, gas works, sewage disposal plant and storm water drainage.

Development Plan

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5.0 Drawings to be Prepared

1. **Boundaries of land** of different types such as residential, agricultural, industrial, etc.
2. Boundary of **green belt** around the town
3. **Contours** of the whole city
4. Different zones
5. Landscape features
6. **Locations of public buildings** and town centers
7. Open spaces including parks and playgrounds
8. Positions of **natural springs, rivers** and streams
9. Positions of public utility services such as water supply station, sewage disposal plant, power plant, etc.
10. Present and proposed **communication systems**, etc.

Development Plan

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6.0 Features of Development Plan

Keep in mind three fundamental before making
“amenity, convenience and health”

- Convenience and cheap means of transport
- Good sanitation and water supply
- Open air spaces
- Population density control
- Proper situations for places of worship, education & recreation
- Rational layout
- Requirement and Distribution of Land(Land Use Pattern)
- Width of roads etc.

Development Plan

7.0 Planning Standards

1. Educational facilities such as primary school, high school and college
2. Medical facilities such as dispensary, health centre and hospital
3. Shopping facilities such as departmental stores, shops, etc.
4. Miscellaneous amenities such as burial ground, crematorium, cinema, auditorium, stadium, petrol filling cum service station, police station, post office, fire station, library, community hall, tele•phone exchange, etc.
5. Width of roads such as village roads, state roads, national highways, etc.
6. Development of land for the construction of build•ings in the form of various building bye-laws; etc.

Development Plan

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8.0 Report

- The written report accompanying the development plan should analyze the existing state of the town and it should include the following topics to suggest the improvement of town in general:
- Cost estimates for immediate measures
- Development of basic industries in urban and suburban zones
- Engineering infrastructure, site development, sanitation and hygienic measures
- Functional zoning and architectural principles involved in the town plan; pattern of highways and urban transportation; population growth for a design period and the first stage of construction
- Technical and economic factors of the project etc.

Development Plan

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9.0 Stages of Preparation

General methods normally followed for the preparation are:

1. Planning department of the local government
2. Specialized planning organization
3. A consultant
4. State town planning department
5. Collection of data and relevant information from civic survey and other sources.
6. Preparation of a tentative draft of the development plan and notifying the same for comments, suggestions and discussions from experts and the public.
7. Considerations of views received from experts and the public with sympathy and without any prejudice.
8. Preparation of the revised development plan accommodating the good aspects of comments received from experts and the public.
9. Determination of the sequence in which the development plan will be implemented.

Development Plan

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10.0 Method of Execution

- The execution of the development plan is carried out by the Municipal or Corporation authorities.
- The first thing to be determined is the layout of the road system.
- It requires a functional approach to the more important sociological aspects of the town, viz. 'Folk, Place and Work'.
- Lastly a financial program is prepared to devise the ways and means for the implementation of the Development Plan according to the Schedule.
- For execution a team of experts in Engineering, Architecture, Public health, Sociology, Economics, Finance etc. headed by a Town Planner is required.

Development Plan

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- The plan making & plan implementation are inseparable
- The interim development Plan also called the Outline Development Plan is thus prepared by the Planning Authority. The statutory time limit is two years.
- It shall then be notified for the public comments and suggestions (Time one month) The Draft plan may be revised in the light of the public and expert comments and shall be submitted for Government's sanction. (Four months from date of publication of the draft plan.
- The Govt. sanctions the revised plan and appoints an arbitrator. The Arbitrator after holding proceedings in respect of each plot publishes the award and submits the detailed proposals to the higher authority such as the President of the Tribunal of Arbitration (No fixed time limit but at least twelve months for small scheme).

Development Plan

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- The Arbitrator prepares the final scheme and submits to Govt. with plans through the local authority (usually six months). The local authority forwards the final scheme to the Govt. (usually three months). Govt. sanctions the final scheme after the photozinc Dept., has printed all the plans.
- The detailed Development Plan also called the comprehensive Development Plan is duly approved and sanctioned by the Govt.

Development Plan

11.0 Legal Status of Development Plan

The implementation of development plan would be possible if it is made legally binding on all the concerned authorities. Hence it should be made obligatory and give the plan. The legal status to facilitate its implementation.

Development Plan

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12.0 Co-operation

- The success of a plan depends on the active participation & cooperation of the people.
- A wide range of voluntary organizations and institutions such as youth clubs, colony associations, chambers of commerce, women councils and professional bodies may be involved in the planning process.
- The mass media such as newspapers, journals, radio, television and cinema can be effective in educating the public on civic problems and planning. Well presented monographs, booklets, handouts, pamphlets, manuals, guides etc. Go a long way in stimulating civic interest in planning.



LAND USE PLANNING

Land Use Planning

Definitions:

- Refers to the rational and judicious approach of allocating available land resources to different land using activities and for different functions consistent with the overall development vision/goal of a particular city
- refers to a document embodying a set of policies accompanied by maps and similar illustrations which represent the community desired pattern of population distribution and a proposal for the future allocation of land to the various land-using activities.

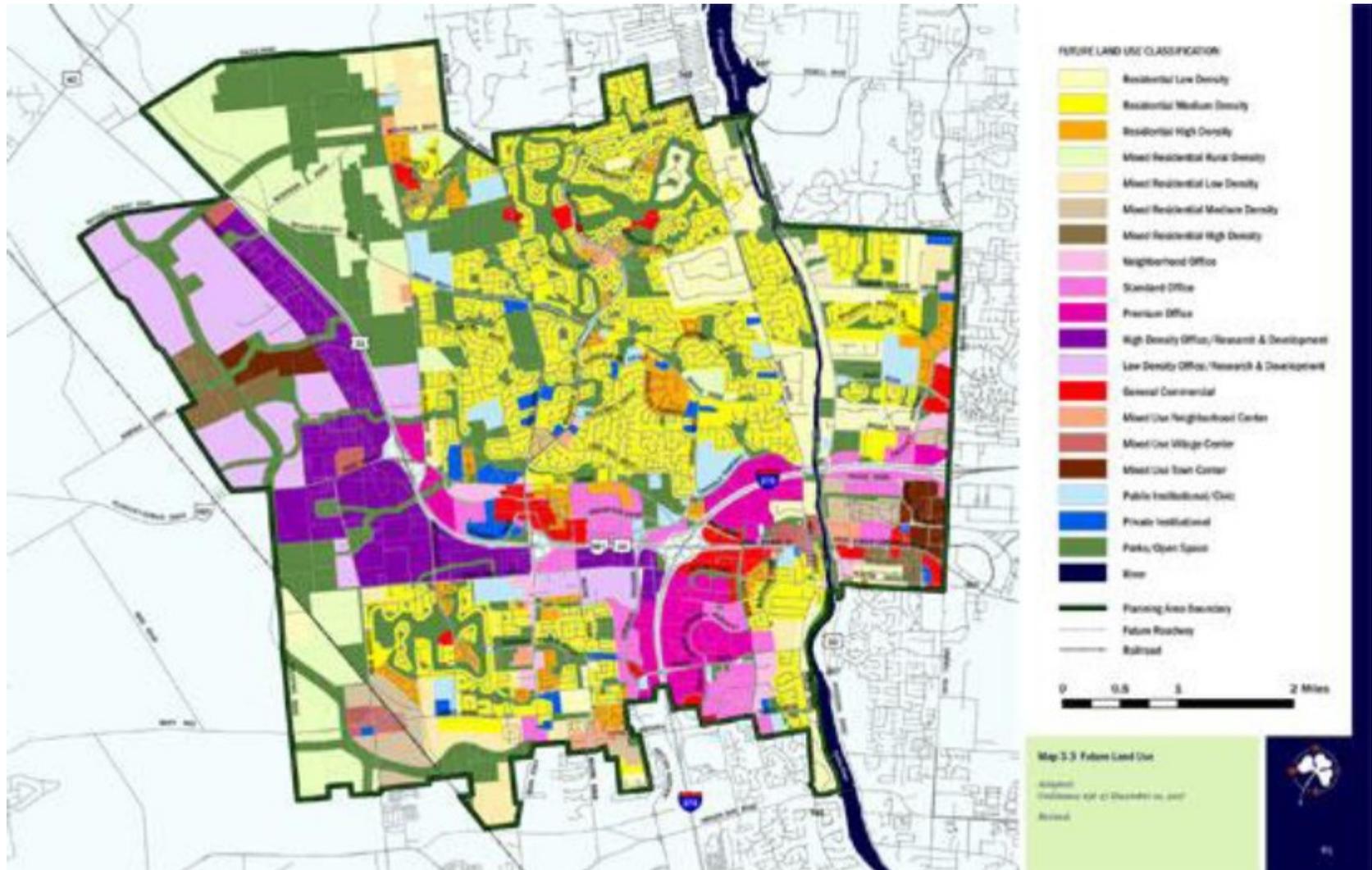
Land Use

- **refers to the manner of utilization of land, including its allocation, development and management.**

OBJECTIVES

- To promote efficient utilization, acquisition and disposition of land ensure the highest and best use of land
- To direct, harmonize and influence discussions and activities of the private and public sectors relative to the use and management of lands
- To reconcile land use conflicts and proposals between and among individuals, private and government entities relative to the present and future need for the land
- To promote desirable patterns of land uses to prevent wasteful development and minimize the cost of public infrastructure and utilities and other social services
- to preserve areas of ecological, aesthetic, historical and cultural significance

LAND USE MAP



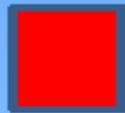
URBAN LAND USE MAP COLOR CODES



RESIDENTIAL



AGRICULTURE



COMMERCIAL



AGRO INDUSTRIAL



INDUSTRIAL



FOREST



INSTITUTIONAL



MINING / QUARRY



PARKS /
PLAYGROUNDS



GRASSLAND/ PASTURE



INFRASTRUCTURE/
UTILITIES



SWAMPLANDS/ MARSHES

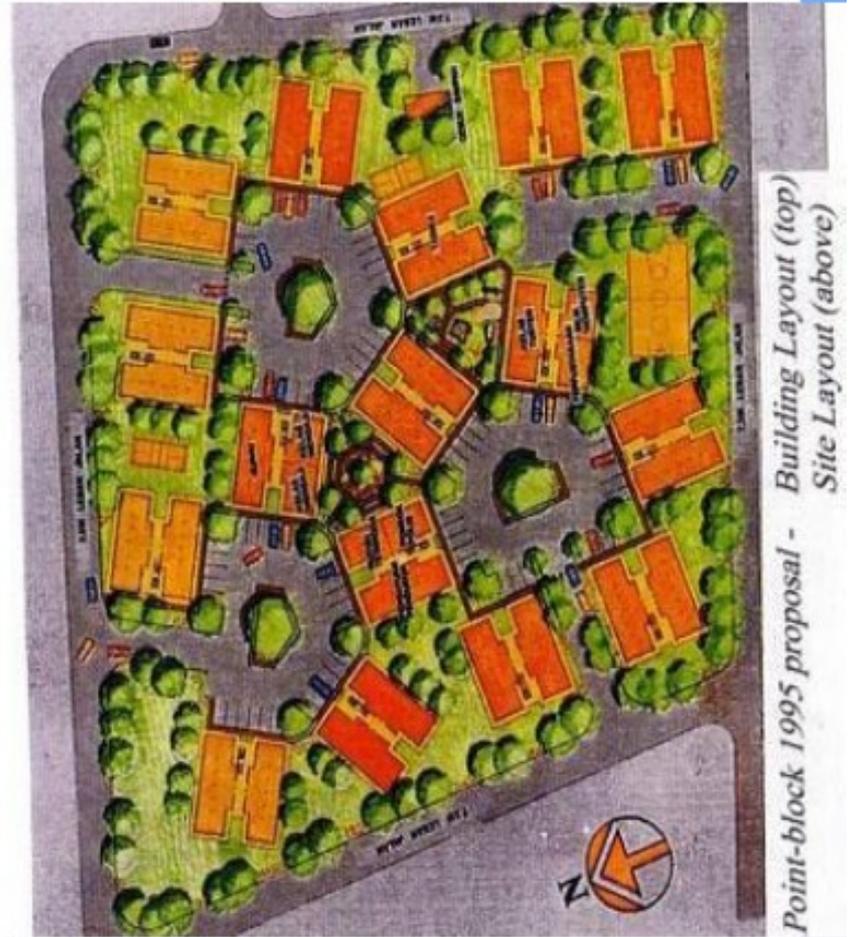
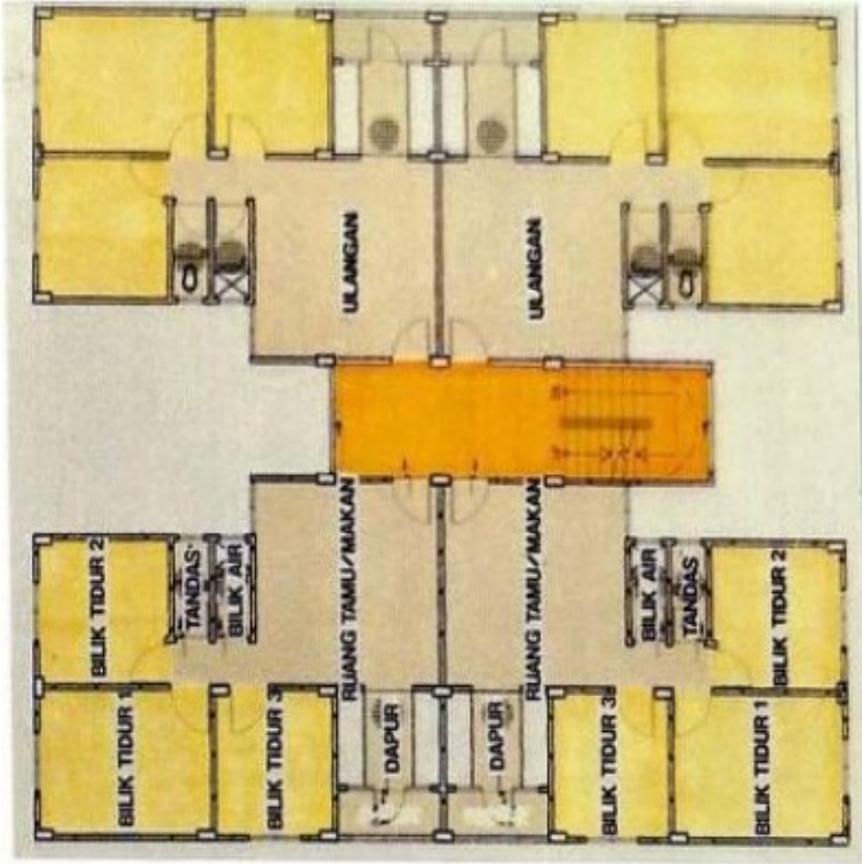


BUILT UP AREAS



CEMETERIES/ LANDFILL/
IDLE LOTS, OTHERS

Typical Types of Residential Communities



Apartments

Typical Types of Residential Communities



Apartments

Typical Types of Residential Communities



Condominium

Typical Types of Residential Communities



**Socialized/
Economic Housing**

Types of Commercial Centers



Major CBD

Types of Commercial Centers



Commercial Strips

Types of Commercial Centers



Minor CBD

Types of Commercial Centers



Neighborhood Centers

COMMERCIAL AREAS

- **Central Business District (CBD)**
- **1. Major CBD** – shopping, service area with largest dept. and variety stores, specialty shops, business and professional services, hotels, theaters, etc.
- **2. Minor CBD** – market as main feature (types: wholesale market, wet and dry market); quasi-residential-commercial or mixed use development.
-
- **Commercial Strip** – extension of CBD
- **Neighborhood Center** – local sources of staple and convenience goods and services; built around supermarket with convenience stores; population served: 7,500-20,000.

SITE SELECTION CRITERIA (COMM'L)

- Site must be most desirable general area as established by the economic survey
- Site must be owned or controlled by developer
- Land cost must be in keeping with overall economic consideration
- Existing zoning must permit shopping center development
- Site must contain sufficient land to permit construction facilities
- Land must be in one piece, free of intervening roadways, right-of-way, easements, major waterways, etc
- Topography and shape of site must permit advantageous planning

- Surrounding road pattern and accessibility must allow full utilization of the business potential
- The structure must be visible from major thoroughfares
- The surrounding areas should be safeguarded against blight
- Retail facilities should be exposed to maximize foot traffic
- Various mechanized traffic types and foot traffic be separated and distinct from one another
- Maximum comfort and convenience for shoppers and merchants should be provided for
- Orderliness, unity and beauty should be achieved

NATIONAL LAND USE AND ALLOCATION SCHEME

-
- **Land Classification** which involves the assessment of unclassified lands under the public domain which include surveying, classifying, studying and mapping areas into agricultural, forest or timber, mineral and national parks;
 - National government/DENR; congress delineates limits of forest lands and national parks.
- **Land Reclassification** is the subsequent classification, allocation and disposition of lands of the public domain, classified as alienable and disposable into specific uses;
 - National government/DENR in coordination with LGUs.

- **Land Subclassification** is the act of determining and assigning the uses of classified public lands;
 - National government/DENR
- **Zoning** is the legislative act of delineating areas or districts within the territorial jurisdictions of cities and municipalities that may be put to specific uses and their regulation, subject to the limitations imposed by law or competent authority;
 - LGUs
- **Land Use Conversion** is the act of putting a piece or parcel of land into a type of use other than that for which it is currently being utilized.
 - National government/DAR

CONCEPTS RELATED TO LAND USE

REVERSIBLE USES

IRREVERSIBLE USES

MULTIPLE LAND USE

COMPATIBLE / INCOMPATIBLE
LAND USE

BEST USE OF LAND

COMPEHENSIVE LAND USE PLAN

physical, social, economic and environmental planning

CONCEPTS RELATED TO LAND USE

REVERSIBLE USES

- – cases when the inherent features and characteristics of the land have not been considerably altered or modified such that the soil horizon, landform, and structure remain intact so that the land can be reverted to its former use or original condition.

IRREVERSIBLE USES

- when land is subject to applications which brought about changes, alteration or modifications so much so that it preempts the original use or it is physically impossible to restore the land to its previous state or condition.

MULTIPLE LAND USES

- – combining different land uses, whether reversible or irreversible, in an orderly and desirable pattern because:
- Land is finite and supply is finite
- Demand is ever increasing
- Competition is there
- Land can indeed have more than one use and uses can be combined in different ways.

COMPATIBLE AND INCOMPATIBLE LAND USES

- – a related concept of multiple uses of land is the compatibility of uses. Some land uses are innately incompatible while others are completely compatible. Compatible uses can coexist harmoniously and effectively in an orderly management

HIGHEST AND BEST USE OF THE LAND

-
- The use of land which generates the maximum profit without negative consequences especially on the environment
- Land should be used in such a manner consistent with its natural qualities to maximize its productivity and also adhere to the principles of sustainable development.
- Simply put, it is utilizing land in a manner that is beneficial to both man and environment.

COMPREHENSIVE LAND USE PLANNING

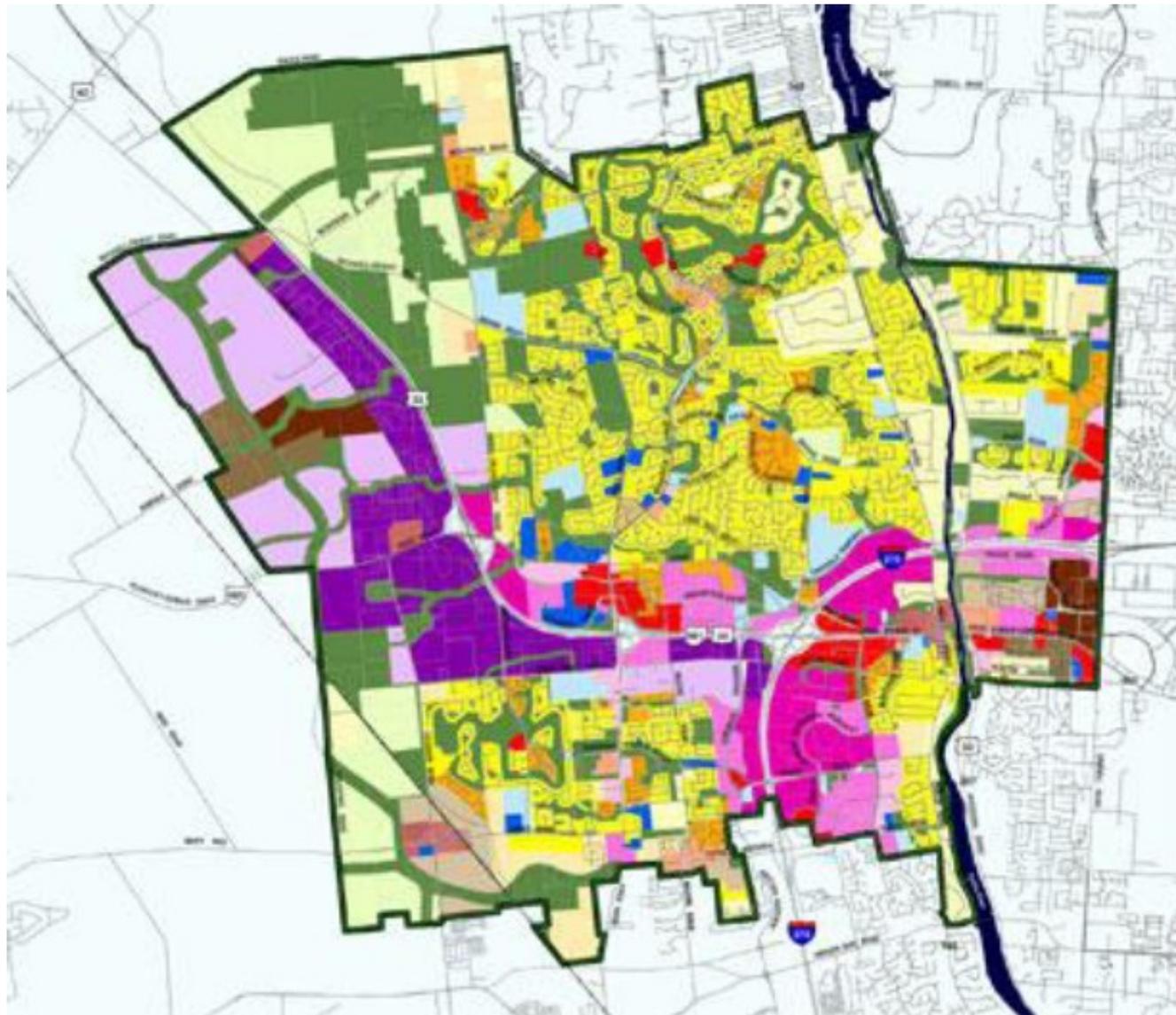
- A document embodying specific proposals for guiding, regulating growth and development of a city or municipality.

MAPS/MAPPING

- a graphical representation of a place or particular phenomena or themes in an area. It is a convenient visual form of spatial data, their distribution and relationships
- a reduced and simplified model of reality containing geographic information. It is a graphic depiction of all or part of a geographic realm where the real-world features have been replaced with symbols in their correct spatial location at a reduced scale

ELEMENTS OF A MAP

- **Map Title** – defines the information and purpose of a map.
- **Legend** – key to the codes and symbols used in a map.
- **Date and Author** – name of map maker and date of survey or period covered by it.
- **North Arrow** – usually, maps are oriented towards the geographic (true) north.
- **Geographic Coordinates** – geographic grid known as latitudes and longitudes.
 - **Latitude (parallels)** – distance measured north and south of the equator.
 - **Longitude (meridians)** – distance measured east and west with the imaginary prime meridian (Greenwich Laboratory in London) as reference line.
- **Scale** – ratio distance on the map itself and the corresponding distance on the ground.
 - **Graphic Scale** – line or bar marked off in graduated distances representing actual distances on the ground.
 - **Numerical/Functional**- compares map distance with ground distance by proportional numbers and expressed as a representative fraction or ratio. Example: 1:1,000 means 1 meter on the map is equivalent to 1,000 meters or 1 kilometer on the ground.



FUTURE LAND USE CLASSIFICATION

- Residential Low Density
- Residential Medium Density
- Residential High Density
- Mixed Residential Rural Density
- Mixed Residential Low Density
- Mixed Residential Medium Density
- Mixed Residential High Density
- Neighborhood Office
- Standard Office
- Premium Office
- High Density Office/Research & Development
- Low Density Office/Research & Development
- General Commercial
- Mixed Use Neighborhood Center
- Mixed Use Village Center
- Mixed Use Town Center
- Public Institutional/ Civic
- Private Institutional
- Parks, Open Space
- River



Map 3.3 Future Land Use

Approved
 Conference #14 on December 10, 2017
 Revised



TYPES OF MAPS

- **1. GENERAL PURPOSE** – shows suite of physical and cultural features at the same time.
- **Reference Map** – shows simple properties of map data.
 - Example: world map, road map, sketch map.
- **Base Map** – working map for the preparation of various maps.
 - Example: general base map, urban base map.



Types of Maps

Reference Map

- **2. THEMATIC** – depicts one single feature of the earth’s surface representing one or two themes.
- **Topographic Map**– shows a limited set of features including terrain, streams, boundaries, and roads.
- **Climate Map** – gives the prevailing type of rainfall in the area.
- **Hydrogeologic Map** – shows existing geologic features, rock types and ground and surface water.
- **Slope Map** – groups area exhibiting a particular range or degree of inclination.
- **Soil Map** – shows the spatial distribution of different soil classification units in a locality.
- **Land Classification Map** – categories of land by the Forest Management Bureau.
 - 1. Forest Reserve
 - 2. Mossy Forest
 - 3. Commercial Forest
 - 4. Logged Over Areas
 - 5. Parks and Wildlife Sanctuaries
 - 6. Swamp lands/Water bodies
 - **7. Alienable and Disposable Land**

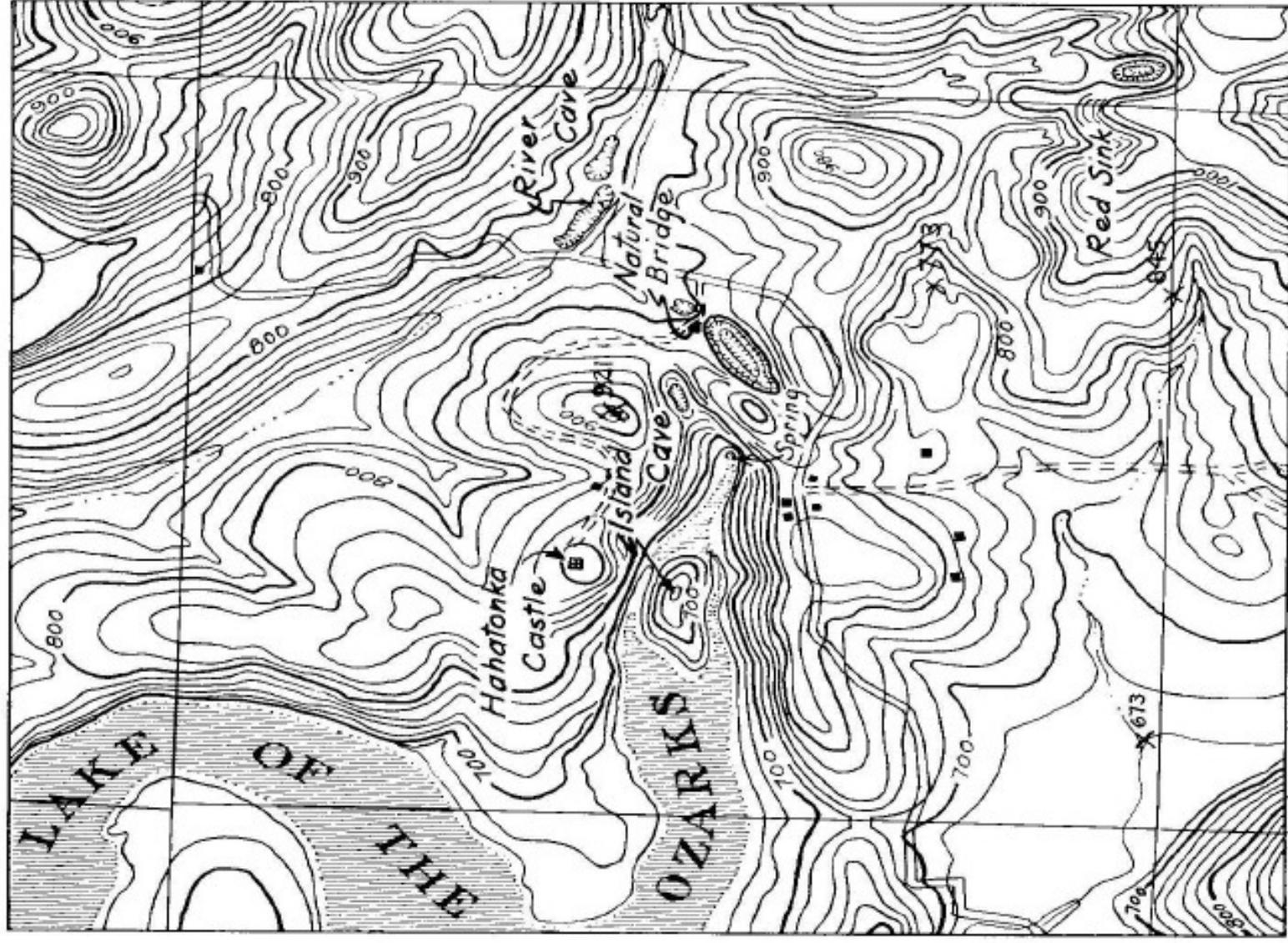
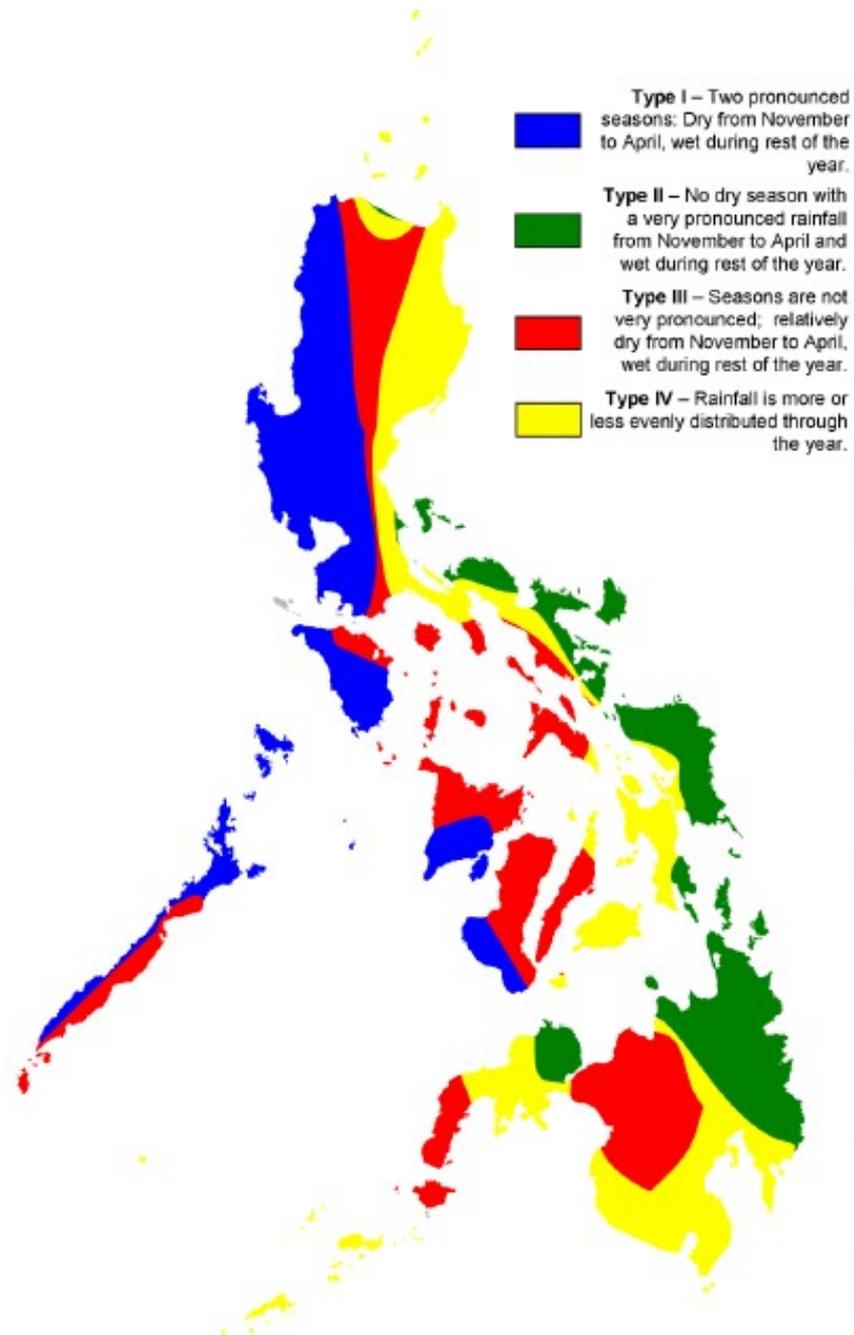
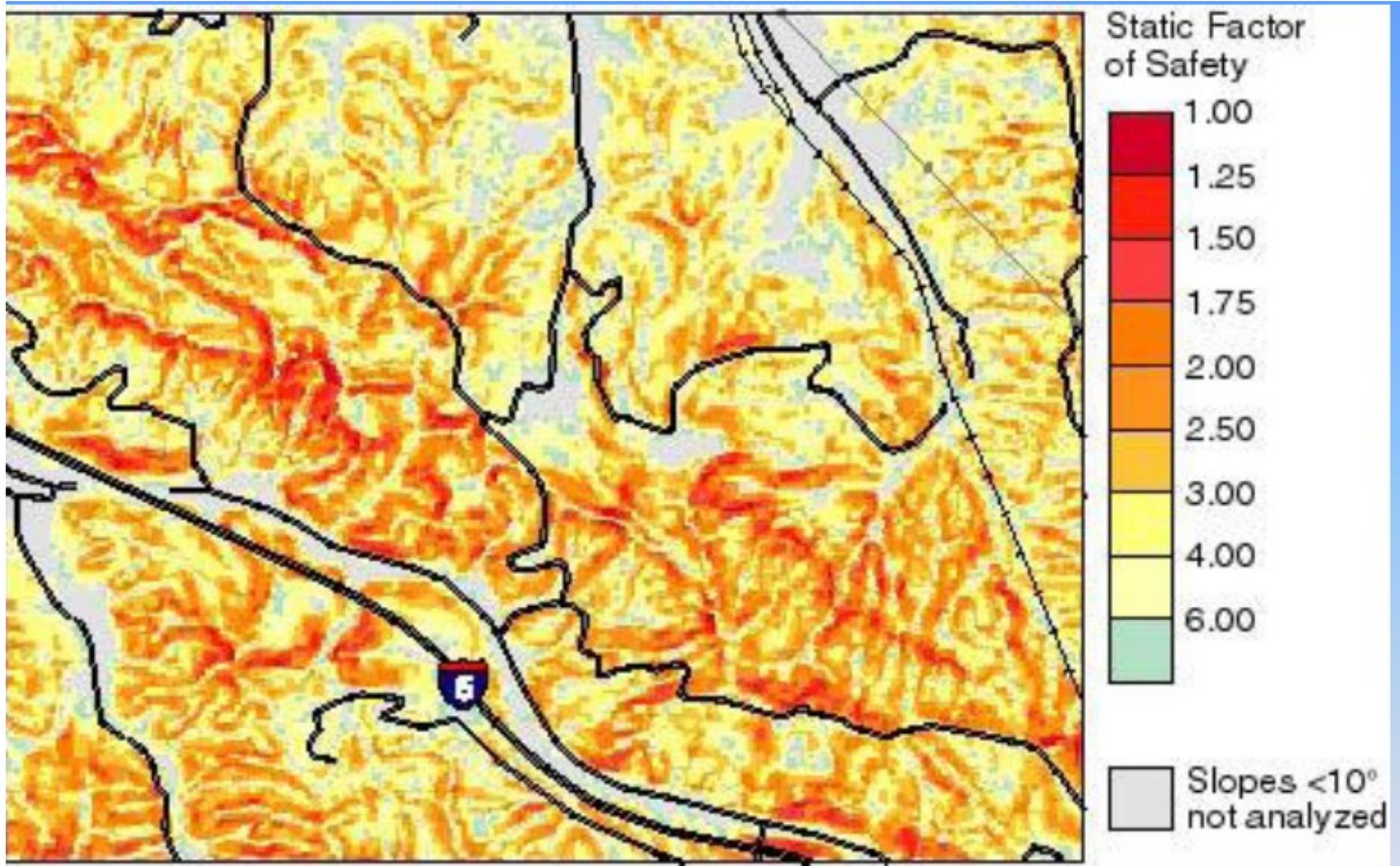


Fig. 55. Environs of Hahatonka Spring, Camden County

Enlargement of part of Hahatonka Quadrangle map; United States Geological Survey. Horizontal scale 1/17,600. Contour interval 20 feet.

Types of Maps
Climatic Map



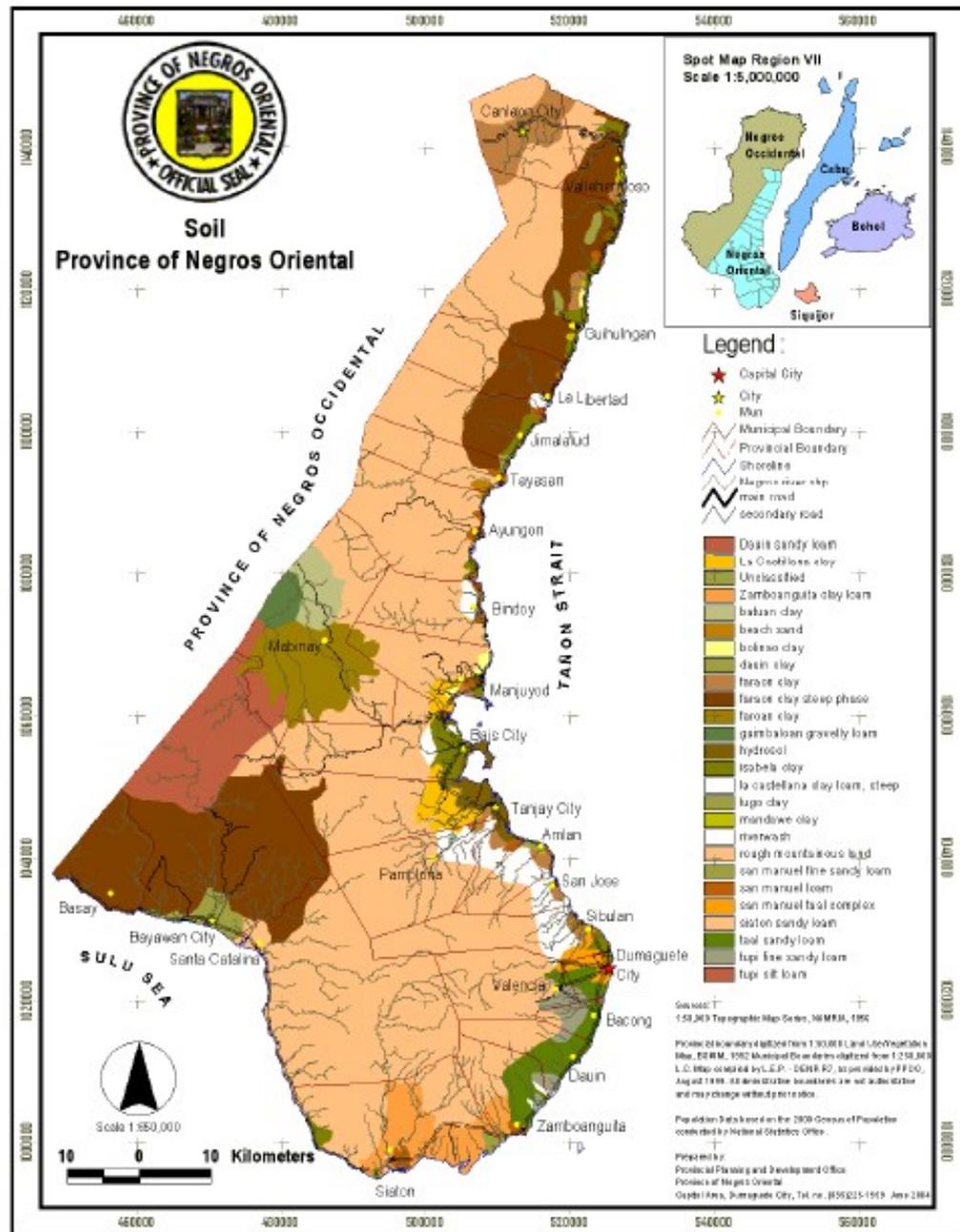


Types of Maps

Slope Map

Types of Maps

Soil Map

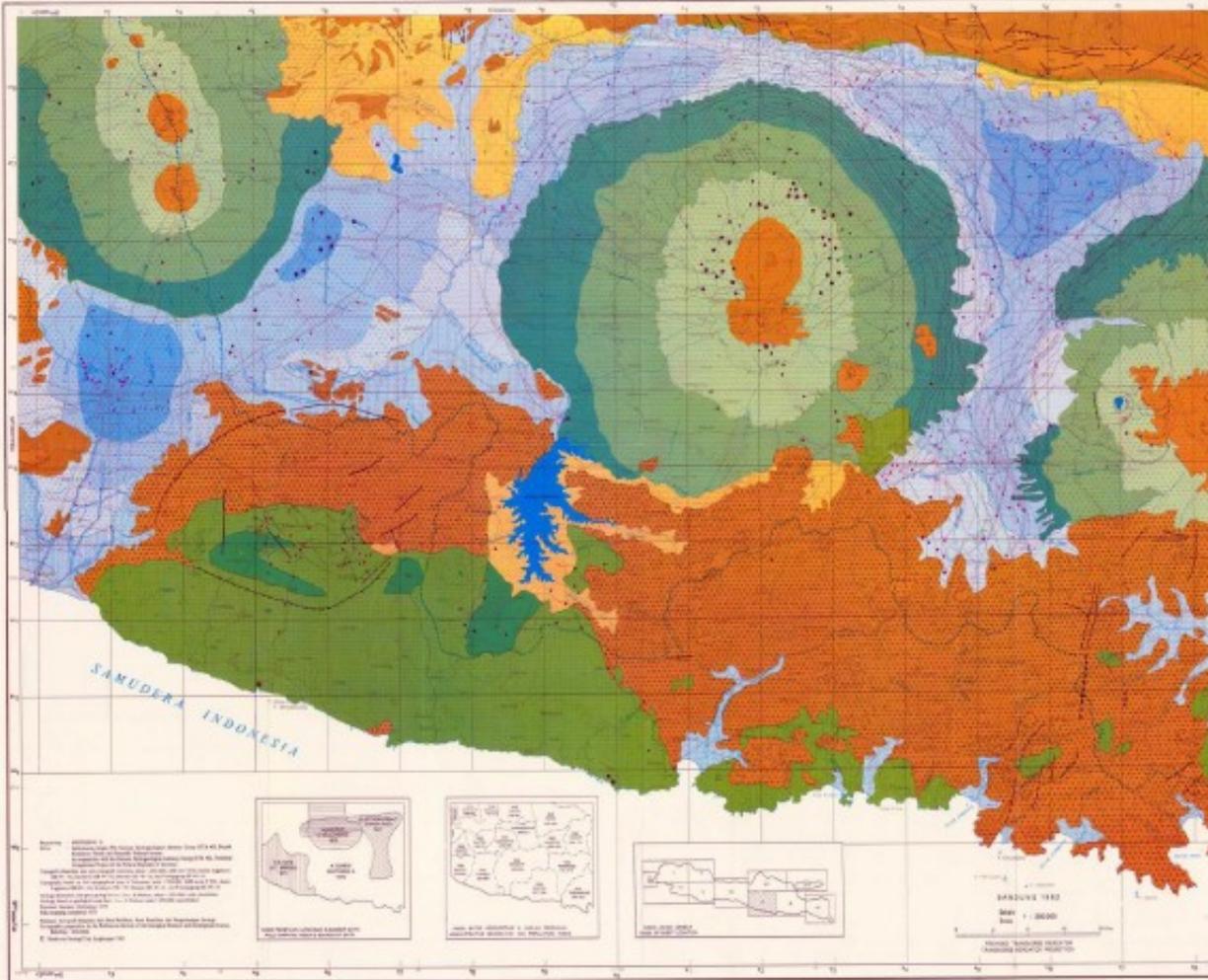


PETA HIDROGEOLOGI INDONESIA
HYDROGEOLOGICAL MAP OF INDONESIA 1 : 250.000

DIKEMBARAKAN DARI PETA LINGKUNGAN
REKONSTRUKSI DAN PENGEMBANGAN LINGKUNGAN
MATERI KEMAHIRAN, 1974

LEMBAGA
PETA D. SURABAYA, 1974

LEMBAGA A - LEMBAGA



- 1. SIMBOL LINGKUNGAN DAN KUALITAS**
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Types of Maps

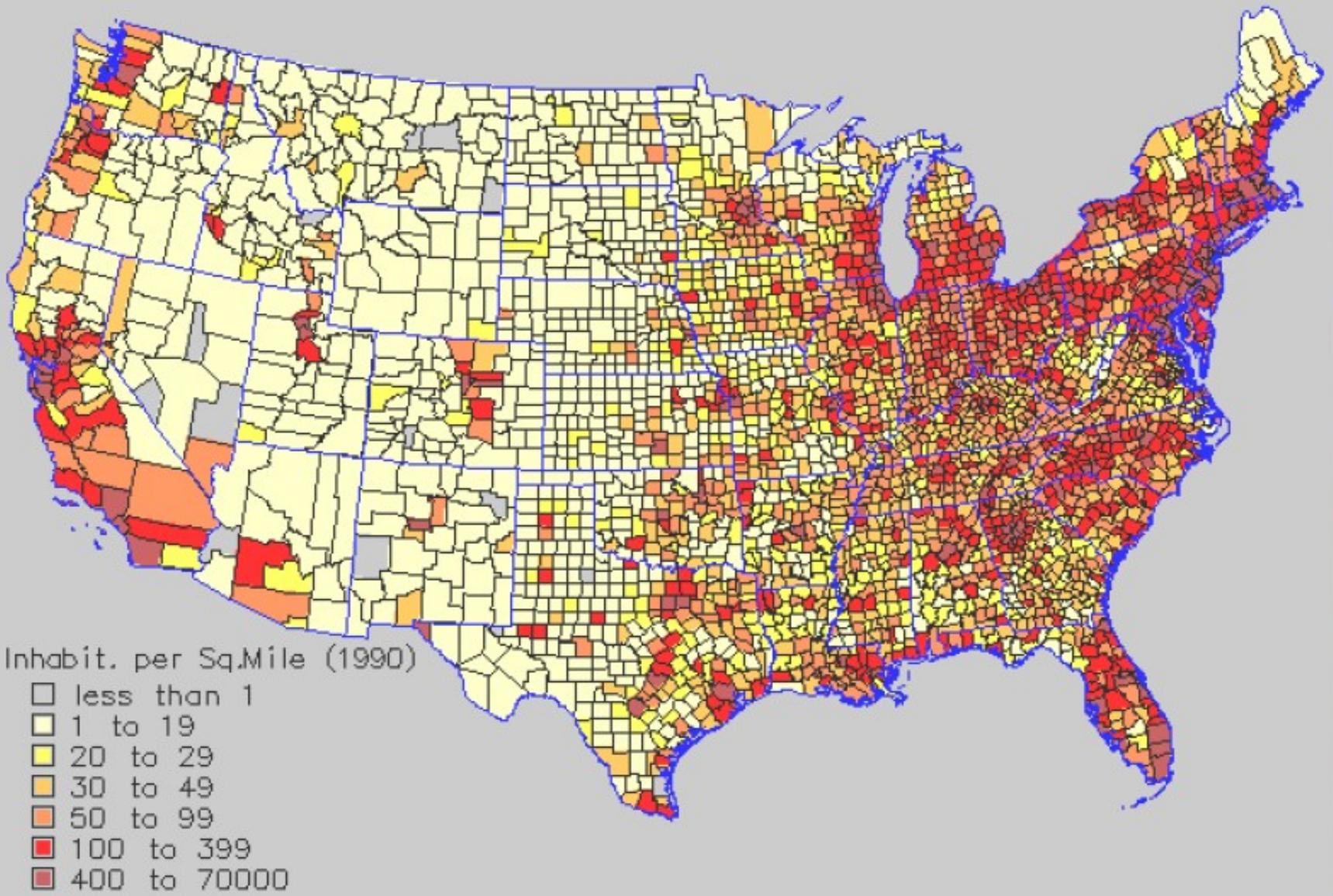
Hydrogeologic Map

- **Population Density Map** – shows concentration of population by class intervals in relation to land area.
- **Cadastral Map** – public record of land ownership.
- **Land Values Map** – indicates relative prices and values of land in an area.
- **Land Use Map** – shows spatial distribution of different land uses.
- **General Land Use** –distribution of land uses covering the entire town.
- **General Land Use Plan** –reflects the planned distribution of land uses.
- **Urban Land Use Map** – distribution of land uses in the urban center.
- **Urban Land Use Plan** –indicates planned distribution of urban land uses.
- **Zoning Map** – shows the zones or districts according to present and potential uses of land.



Types of Maps

Cadastral Map



Population Density Map

Types of Maps

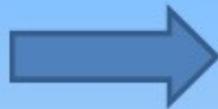
- **3. ANALYTICAL** – illustrates the derived results from the analysis of two or more variables according to desired outputs.
- **Erosion Hazard Map** – analysis of soil and slope of an area.
- **Flooding Hazard** – shows areas where flooding usually occur.
- **Land Capability Map** – indicates suitability of areas for cultivation.
- **Soil Suitability Map** – provides information on the degree of soil suitability for urban development.
- **Development Constraints Map** – illustrates the obstacles to development in the physical sense like subsidence, flooding risks, or fault lines.
- **Land Management Unit** – a land resources inventory map describing the shape of land in terms of relief, not slope; an input map to land suitability map.
- **Land Suitability Map** – classifies land into categories based on the degree to which the characteristics of the land can satisfy the environmental requirements of specific crops without deterioration.

PLANNING ORGANIZATIONS

- **Regional Planning**
-
- **NEDA** – National Economic Development Authority
- **NLUC** – National Land Use Committee
- **RDC** – Regional Development Council
- **PDC** – Provincial Development Council
- **PLUC** – Provincial Land Use Committee
- **Sanggunian Panlalawigan**
-
- **Urban Planning**
-
- **HUDCC** – Housing and Urban Development Coordinating Council
- **HLURB** – Housing & Land Use Regulatory Board
- **RLUC** – Regional Land Use Committee
- **M/CDC**–Municipal/City Development Council
- **BDC**– Barangay Development Council
- **Sanggunian Panglunsod/Bayan**
- **Barangay Council**

- **HLURB (HOUSING AND LAND USE REGULATORY BOARD)** – the planning, regulatory and quasi-judicial instrumentality of government for land use development.
-
- **Town Planning and Zoning Assistance Program**
 - Provide technical assistance in CLUP preparation.
 - Identification and zoning of site for socialized housing
 - Ratification of land use plans and zoning ordinances
-
- **Real Estate Management Program**
- Formulation of design standards and guidelines of subdivisions and condominiums
- Issuance of Permits and Licenses
-
- **Land Use Enforcement Plan**
- Monitoring of all projects issued permits by LGUs and HLURB
- DZA supervision
- Adjudication of complaints

Department of
Environment and
Natural Resources



Environmental
Impact
Assessment

Environmental Impact
Statement

PREVENTION

MITIGATION

COMPENSATION

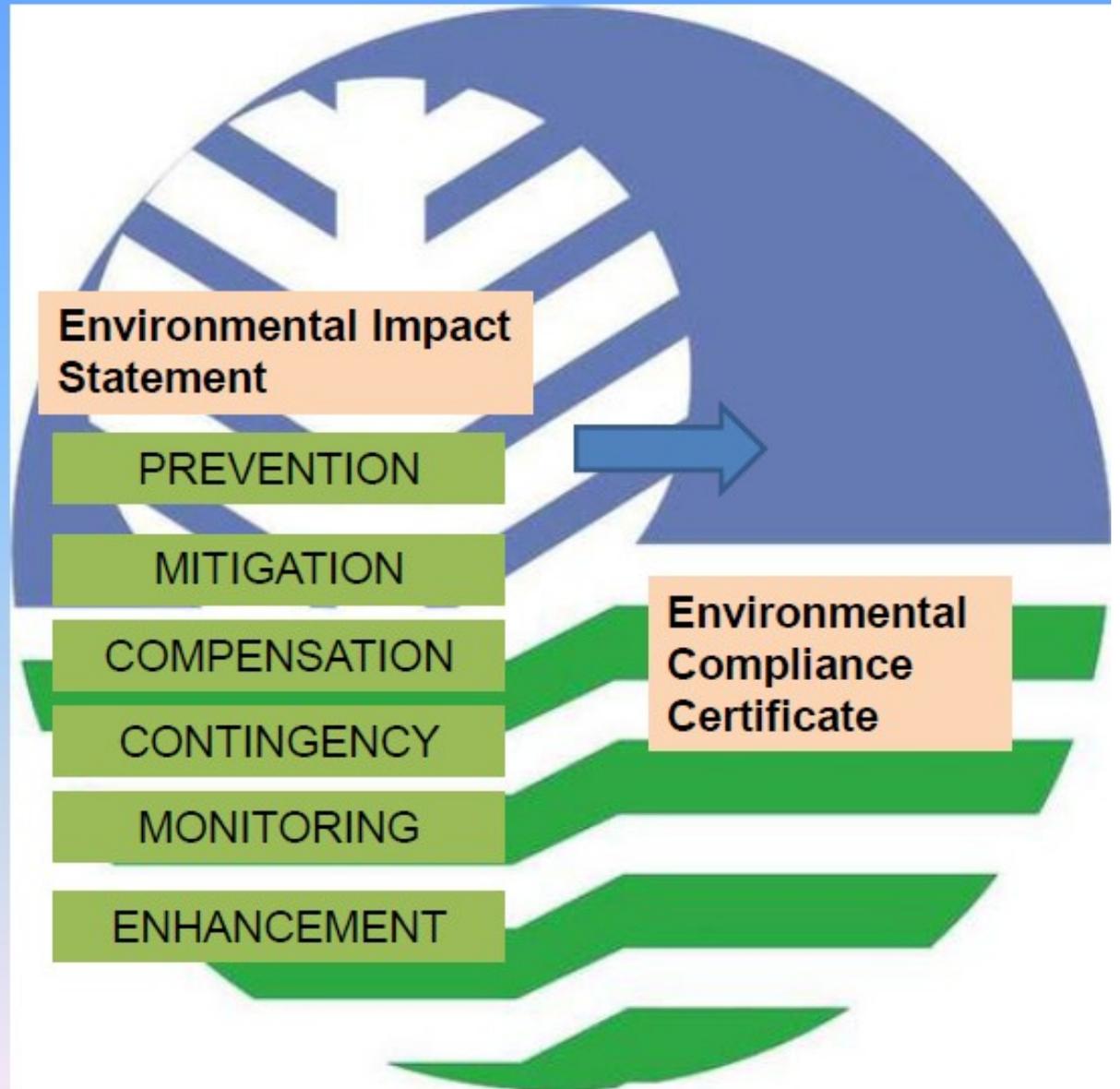
CONTINGENCY

MONITORING

ENHANCEMENT



Environmental
Compliance
Certificate



***Environmental
Critical Areas***

Heavy Industries



***Environmental
Critical Areas***

Tourist Spots



***Environmental
Critical Areas***

Habitat of Endangered Species



***Environmental
Critical Areas***

Historic, Archaeological, Scientific Sites



***Environmental
Critical Areas***

Tribes and Cultural Communities



***Environmental
Critical Areas***

Natural Calamities prone Areas



***Environmental
Critical Areas***

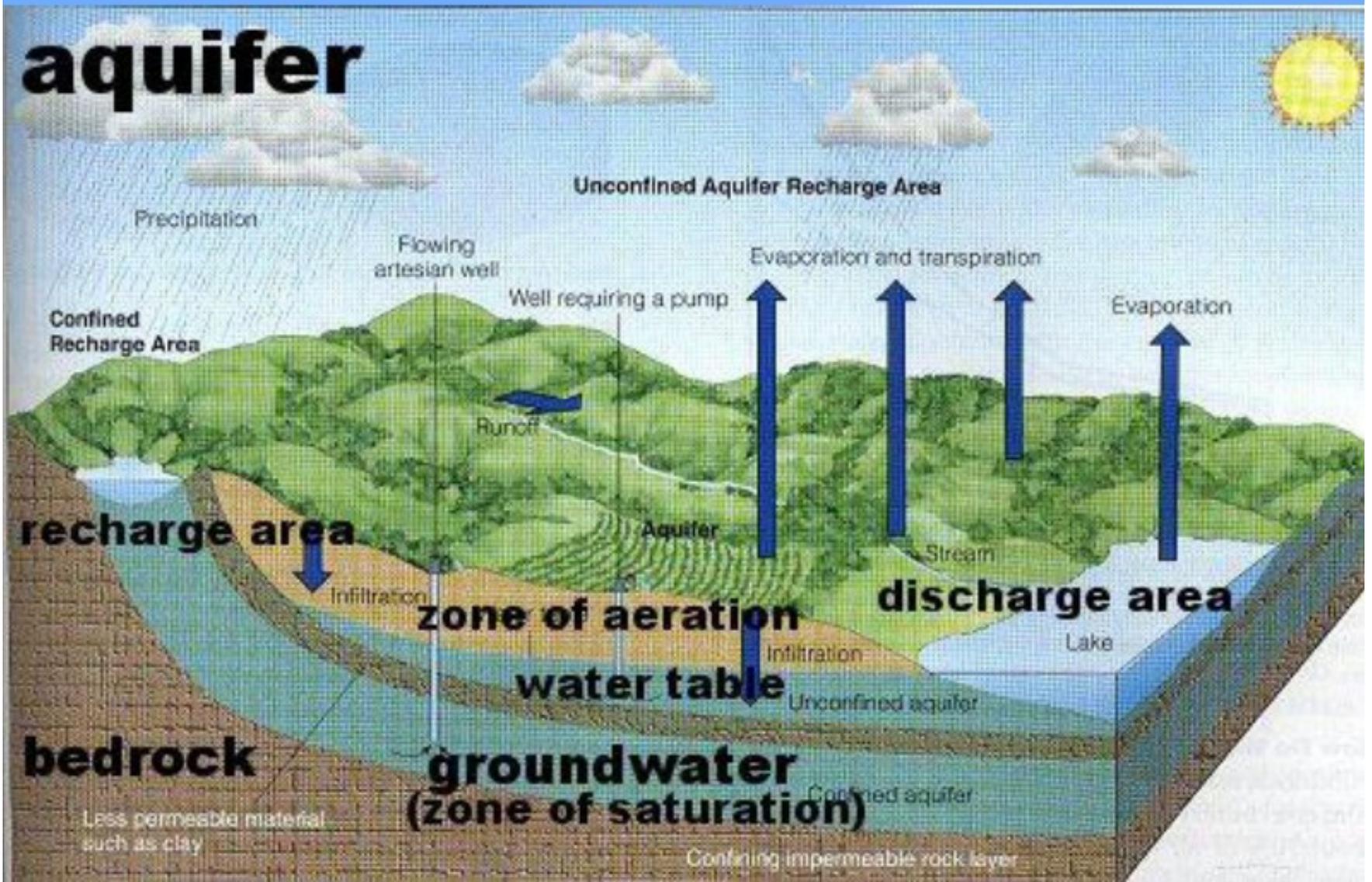
Critically Sloped Areas



***Environmental
Critical Areas***

Prime Agricultural Lands









***Environmental
Critical Areas***

Coral Reefs



MASTER PLAN



MASTER PLAN:

A master plan or a development plan or a town plan may be defined as a general plan for the future layout of a city showing both the existing and proposed streets or roads, open spaces, public buildings etc.

A master plan is prepared either for improvement of an old city or for a new town to be developed on a virgin soil.

A master plan is a blueprint for the future.

It is an comprehensive document, long-range in its view, that is intended to guide development in the township for the next 10 to 20 years.

OBJECTS OF MASTER PLAN

- It aims at intelligent and economic spending of the public funds for achieving welfare of the inhabitants in respect of amenity, convenience and health.
- It arranges the pattern of a town in such a way so as to satisfy the present requirements without introduction of future improvements by the coming generations.
- It helps in restricting the haphazard and unplanned growth.

- It places various functions which a town has to perform in physical relationship of each other so as to avoid the chances of mutual conflict.
- It removes the defects of unco-ordinated physical growth of the various components of town due to the fact that it considers the entire city area or town as planning and development entity.
- It serves as a guide to the planning body for making any recommendations for public improvement.

NECESSITY OF MASTER PLAN

Followings are the reasons which have lead to the thinking of having a master plan for

The town:

- To control the development of various industries in a systematic way.
- To discourage the growth of town in an unplanned and unscientific way.
- To give a perspective picture of a fully developed town.

- To limit to a certain extent the unprecedented flow of rural population to the urban area.
- To offset the evils which have come up due to over-crowding of population such as acute shortage of houses, traffic congestion, inadequate open spaces and insufficiency in public amenities; etc.

DATA TO BE COLLECTED

The data required for the preparation of a master plan of a town can be listed as follows:

- Details of trades and industries.
- Development of the airports.
- Economic condition of the authority.
- Environments of the site.
- Facilities of the transport.
- Geological condition of the site.
- Land values and land use pattern.
- Locations of spots of natural beauty.

- Locations of the water supply unit.
- Meteorological details such as intensity and direction of wind, temperature, rainfall etc;
- Mineral resources.
- Places of historic origin.
- Political condition of the surrounding area.
- Population.
- Requirements for railway stations, goods yards and shipping facilities.
- Special requirements for power houses, gas works, sewage disposal plant and storm water drainage etc.

DRAWING TO BE PREPARED

To give graphical representation to various ideas and proposals contained in the master plan of a town , various maps and drawings are to be prepared. These are-

- Boundaries of land of different types such as residential, agricultural, industrial etc.
- Boundary of green belt surrounding the town.
- Contours of the whole city.
- Different zones
- Landscape features
- Locations of the public buildings and town centers.

- Open spaces including parks and playgrounds.
- Positions of the natural springs, rivers and streams.
- Position of the public utility services such as water supply station, sewage disposal plant, power plant etc
- Road system etc.

FEATURES OF MASTER PLAN

The features to be included in a master of a town can be listed as follows:

- Convenience and cheap means of transport.
- Good sanitation and water supply.
- Open air spaces.
- Population density control.
- Proper situations for places of worship, education and recreation.
- Rational layout.
- Width of roads etc.

PLANNING STANDARDS

The planning standards are fixed for various types of uses such as:

- Educational facilities such as primary school, high school and college.
- Medical facilities such as dispensary, health centre and hospital.
- Shopping facilities such as departmental stores, shops etc.

- Miscellaneous amenities such as burial ground, crematorium, cinema, auditorium, stadium, petrol filling cum service station, police station, post office, fire station, library, community hall, telephone exchange etc.
- Width of roads such as village roads, state roads, national highway etc.
- Development of land for the construction of buildings in the form of various buildings bye-laws etc.