Comprehensive Plan

City Hall

City of Crystal Springs Mississippi

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CITY OF CRYSTAL SPRINGS, MISSISSIPPI

COMPREHENSIVE PLAN

Including:

Goals and Objectives

Land Use / Transportation Plan

Public Facilities Plan

Prepared By:

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INTRODUCTION

PURPOSE OF THE PLAN

The purpose of this Comprehensive Plan is to serve as a policy guide to the decision-making process in city government. City officials recognize the importance of planning in making effective decisions concerning the city's future. This plan is a result of extensive study into existing development patterns as well as population and economic studies. This plan should, however, be reviewed and updated periodically in order for it to continue to be effective and to grow along with unforeseen economic and population patterns.

ELEMENTS OF THE PLAN

Section 17-1-1 of the Mississippi Code defines a Comprehensive Plan as follows: "... a statement of policy for the physical development of the entire municipality or county adopted by resolution of the governing body..." A comprehensive plan must include a minimum of four components in order to comply with the statute. These components are long-range goals and objectives, a land use plan, a transportation plan, and a community facilities plan.

The goals and objectives of a comprehensive plan are made with respect to the future. Long-range community development plans help a community identify what it desires to achieve in the future. Section 17-1-1 of the Mississippi Code requires that the goals and objectives section of the plan address residential, commercial, and industrial development as well as parks, open space, and recreation. Additionally, street and road improvements, public schools, and community facilities must be considered.

The second part of a comprehensive plan is the Land Use Plan. This plan designates, in map form, the proposed distribution and extent of land use for residential, commercial, industrial, and recreational lands, as well as public and quasi-public facilities and open space. The land use section of this plan contains projections of population, economic growth, and land use for the community.

The third part of a comprehensive plan is the Transportation Plan. This plan, in map form, classifies all existing and proposed streets, roads and highways and shows them on the Land Use Plan. The Transportation Plan covers the same time period that the Land Use Plan covers. Based on traffic predictions, the plan includes arterial, collector and local streets, and roads and highways, as defined by minimum rights-of-way and surface width requirements. The final portion of the comprehensive plan is the Community Facilities Plan. Used as a basis for making capital improvement decisions, the community facilities plan includes: housing, schools, parks and recreation, public buildings and facilities, utilities and drainage.

HOW TO USE THIS PLAN

Overview

As noted in the Introduction, a comprehensive plan serves as a policy guide for the physical and economic development of the community. It is to be used in making decisions regarding rezoning, variances, special exceptions, and site plan review. It may also be used to aid in locating business, industry, and public facilities. Finally, it forms the basis of a zoning ordinance and a capital improvements program.

Community planning does not attempt to replace market forces of supply, demand, and price but to shape and channel market forces by establishing certain rules for development and conservation. A community plan should foster growth that enhances the community and not "any growth." For example, haphazard growth is unsightly and wasteful of space and public facilities, which results in higher public costs and property tax increases.

According to state law, zoning and other land use regulating must be based upon a comprehensive plan. This means that zoning and subdivision regulations, at a minimum, must conform to the local comprehensive plan. The implication is that comprehensive plans must precede land use regulations in preparation and adoption. Regulations that are consistent with, or conform to, a comprehensive plan must be consistent with a plan's policies, goals, and objectives as well as the land use plan map and the other plan elements. Even though there is generally not an exact identity between the land use plan map and the zoning map, the two should mirror each other as closely as possible.

The reason for such consistency or compatibility is that the courts are likely to uphold land use decisions when these decisions are based on plans. For example, land use decisions requiring an upzoning (zoning to a more intensive use) or a downzoning (zoning to a less intensive use), when challenged on taking grounds, are likely to be upheld by the courts.

The goals and objectives element of the plan is used by the governing authority to have written, consistent policies about how the community should develop. The plan enables the legislative body to make decisions on development matters that arise, using a unified set of general, long range policies. The plan is supposed to serve as a practical working guide to the governing body in making decisions.

The governing body uses the comprehensive plan to take action on two types of physical development matters: 1) measures which are specifically designed to implement the comprehensive plan (zoning ordinance, subdivision regulating, capital improvements program and budget, the official map, and development plans), and 2) other measures which routinely require legislative approval (rezoning cases, special use permits/special exceptions/ conditional use permits, variance applications, subdivision plats, street closing, site acquisitions, and public works projects). For both types the plan should at least be consulted to see if the plan speaks specifically to the matter or provides any guidance as to how the matter should be handled. It should be remembered that the plan may not indicate what action to take, nor will it answer all the questions which come before the governing body. It is not supposed to; it's purpose is to serve as a

generalized guide, which has the force of law in many communities.

Use of the Plan:
The proponent or applicant for a zoning change must show that the proposed change is in conformance with the comprehensive plan. The applicant must also show that there is a public need for the kind of change in question, and that the need will be best served by changing the zoning classification of the property in question.

Usually, a rezoning's conformance or nonconformance can be quickly established by looking at the land use plan map. The colored designations of land use categories on the map should follow specific boundaries to be useful as a decision making guide. Arbitrarily drawn land use boundaries can make it difficult to determine into which map section a particular piece of property falls. If an applicant's property falls on or near the boundary between a conforming and a nonconforming land use category on the land use plan, the applicant should make a case that his particular proposal is consistent with the plan to the nearest natural topographical boundary, or to the nearest street or property line. The applicant should also establish conformance with both the map and the text, if possible, and it is important that both the plan and the facts showing conformance be placed into the record of the hearing.

Nonconformance to the Plan and Plan Amendments:
If the proposed change does not conform to the plan, the plan must be amended before the requested change in zoning classification can be approved. For all practical purposes, if an applicant submits a plan amendment application to change the designation of a parcel of land, he should also submit a rezoning application. The application should explain exactly why a plan amendment and zoning map amendment are needed. The reason is that the Planning Commission should be informed as to the intent or the end result of the plan amendment so that they can make an informed decision. Most proposed plan amendments are in pursuit of rezoning.

All development proposals, as well as proposed rezoning, would not only be reviewed in light of the standards set forth in the zoning ordinance, but also according to each element of the plan. The goals, objectives would be checked against the proposal to determine if there are any conflicts. The Land Use Plan must be checked to see if the proposed rezoning is in line with the designated land use category. For example, if a proposed rezoning to a multi-family district is indicated, then the Land Use Plan must show a high density classification for that site. The proposed rezoning must not be in conflict with the Transportation Plan's recommendations, nor with those of the Community Facilities Plan, both of which relate to capital improvements.

Implementation Devices:
Once the plan has been prepared, it needs to be implemented. There are three primary means or devices commonly used to implement comprehensive plans, zoning ordinances, subdivision regulations, and capital improvements programs. Other devices include official maps and specific development plans. Comprehensive plans should be reviewed each year to see if they need revision. Plans should be completely revised/rewritten every five years to take advantage of changes that have occurred and to use current information.

Comprehensive plans can and should be used for concurrency plans. This is the concept that adequate infrastructure should be in place before development is allowed to occur or as a condition of rezoning. Otherwise, what often happens is that when infrastructure is inadequate to support development, the existing facilities are overwhelmed and the cost of bringing the infrastructure up to standard can be quite expensive and difficult. It is better to have adequate infrastructure in place before development takes place. This becomes a matter of timing.

CHAPTER I

GOALS AND OBJECTIVES

Goals and objectives are the cornerstone of the urban planning process and form the framework for public decision making. The following are Goals and Objectives for Crystal Springs and the surrounding "study area":

GENERAL GOALS

GOAL: Through new developments, make the community a healthy, safe and convenient place, and to provide a pleasant and attractive atmosphere for living, shopping, recreation, civic and cultural, and service functions.

OBJECTIVE: To ensure that future development will be in the best interest of the community and its citizens, measures will be taken which will generally improve the quality of life of the citizens of this community.

GOAL: To guide and direct the development of the foreseeable future into desirable forms and patterns rather than inefficient sprawl.

OBJECTIVE: To prevent the inefficient use of land. By using the comprehensive plan as a guide to development, the desired land use pattern will be produced.

GOAL: To coordinate living areas, working areas, and leisure time areas into an integrated relationship and create a unique combination of function, circulation, and image through which a balanced community development can be reached.

OBJECTIVE: Development of residential, commercial, recreational, and other areas will be in such a manner as to compliment the overall land use pattern.

RESIDENTIAL DEVELOPMENT

GOAL: To maintain established residential density patterns in order to produce desirable concentrations of residences that will not overburden the local community facilities or cause congestion.

OBJECTIVE: To maintain zoning regulations with regard to lot size requirements for each type of residential development.

FIGURE 1: LOW DENSITY SINGLE FAMILY HOUSING

GOAL: To require sufficient open space in conjunction with all residential uses in order to prevent overcrowding and provide sufficient light and air.

OBJECTIVE: To prevent through adoption of a Land Use Plan and Zoning Ordinance the location of high density residential or intense commercial uses (i.e., commercial uses that involve outdoor activities and generate a high volume of traffic---generally above 70 average daily trips per 1,000 square feet of Gross Floor Area) immediately adjacent to single-family residences, UNLESS proper buffering is provided in the form of wide set-backs with required screening and landscaping of the set-backs. These set-backs should not be encroached upon by parking, driveways, patios or other paved areas.

GOAL: To prevent exposure of residential areas to adverse impacts of high levels of noise, heavy vehicular traffic, and other undesirable environmental factors.

OBJECTIVE: To prohibit ALL residential development along arterial streets, highways and railroads where the projected noise exposure will exceed an outdoor day-night average sound level of 65 decibels (or 65 DBL), as determined by street/ highway

traffic projections and projected railroad operations contained in the Land Use Plan and Transportation Plan.

GOAL: To allow a wider range of options in order to meet the need for quality housing.

OBJECTIVE: To permit the location of manufactured homes ONLY in certain tightly defined zones: (1) manufactured home parks (2) manufactured home subdivisions or (3) specified single-family residential areas.

OBJECTIVE: To encourage development of quality apartment communities.

COMMERCIAL DEVELOPMENT

GOAL: To promote development of well-designed, attractive commercial uses in areas of the City that are suitable for and compatible with the particular use proposed.

OBJECTIVE: To segregate commercial uses on the Land Use Plan by intensity of use. Commercial uses which involve outdoor activities, heavier vehicular traffic, and noise should be located well away from ALL residential uses.

OBJECTIVE: To permit future outdoor commercial activities to be established in Crystal Springs only under strict development standards, such as wide set-backs, screening, access control, etc., and only when the proposed use is compatible with surrounding uses.

GOAL: To provide for safe, efficient traffic access to commercial areas and sufficient off-street parking for all commercial uses.

OBJECTIVE: To develop new vehicular access control regulations and review off-street parking requirements as part of the drafting of a Zoning Ordinance.

GOAL: To develop sign regulations which allow merchants to convey their message to customers without creating traffic safety hazards or becoming garish.

OBJECTIVE: To include regulations in the Zoning Ordinance controlling the size, location, and type of illumination of all outdoor signs in the City of Crystal Springs.

GOAL: To require landscaping in accordance with adopted standards along the street frontage of all new commercial uses in order to insure consistent treatment along arterial streets.

OBJECTIVE: To require landscaping in all areas of a commercial lot that is not used for buildings, parking, driveways, patios and sidewalks. This landscaping should be installed in accordance with standards adopted by the City.

FIGURE 2: PLANNED COMMERCIAL DEVELOPMENT

INDUSTRIAL DEVELOPMENT

GOAL: To designate adequate and suitable land for the expansion of existing industries.

OBJECTIVE: Expansion of industrial areas will be determined based upon future predictions of industrial activity and the Land Use Plan.

GOAL: To provide well-located sites adequately served by highways, railroads, utilities and services for new industrial development.

OBJECTIVE: To promote new industrial development.

PARKS AND OPEN SPACE

GOAL: To develop parks and open space in accordance with prototype standards specified in the Mississippi State Comprehensive Outdoor Recreation Plan (SCORP) to insure that the long-range open space and recreational needs of the citizens of

Crystal Springs are met.

OBJECTIVE: To commit to the enhancement of the overall community by providing safe, well-maintained, and steadily-improving facilities that promote activities for the physical and mental well-being of citizens of all ages, including our senior citizens, with a special emphasis on youth.

FIGURE 3: CHAUTAUQUA PARK

TRANSPORTATION

GOAL: To provide an efficient and a safe street system which will meet the travel demands of motorists by implementing traffic operational improvements and major street projects, such as widening of thoroughfares and construction of new streets where needed.

OBJECTIVE: To provide better traffic flow, to reduce traffic congestion and accidents, and to improve vehicular accessibility and circulation.

DOWNTOWN HISTORIC DISTRICT

GOAL: To preserve the character of the Downtown District of Crystal Springs by preventing the location of inappropriate land uses throughout the District and prohibiting incompatible architectural design and materials throughout the District.

OBJECTIVE: To prescribe land uses in the Zoning Ordinance which are compatible with the character of the area including: single-family detached residential, "indoor" commercial uses (where there is little or no outdoor storage or display of merchandise) and multiple-family residential uses as special exceptions.

OBJECTIVE: To allow residential living areas such as loft-style apartments located above commercial areas of buildings or condominiums located in commercial or office buildings.

FIGURE 4: DOWNTOWN CRYSTAL SPRINGS

CHAPTER II

LAND USE/ TRANSPORTATION PLAN

INTRODUCTION AND METHODOLOGY

Section 17-1-1 of the Mississippi Code specifies that the Land Use Plan element of the Comprehensive Plan shall designate "---in map or policy form the proposed general distribution and extent of the uses of land for residences, commerce, industry, recreation and open space, public/quasi-public facilities and lands." The Code also requires that "background information shall be provided concerning the specific meaning of land use categories depicted in the plan in terms of the following: residential densities; intensity of commercial uses; industrial and public/ quasi-public uses; and any other information needed to adequately define the meaning of land use codes (reflected on the Land Use Plan map). Projections of population and economic growth for the area encompassed by the plan may be a basis of quantitative recommendations for each land use category."

The purpose of the land use section of the comprehensive plan is to inventory the community's existing land use patterns and to recommend policies for future development that are consistent with the community's character. These policies also involve decisions on how the land use patterns should change for future needs. The Land Use Plan is a vital part of the Comprehensive Plan since zoning decisions are required by State law to be based on the adopted Land Use Plan. The Land Use Plan is subject to change as the City grows and may be amended at any time following the necessary public hearings.

In addition to an existing land use inventory, population, housing, and employment projections are also used to determine future development patterns. Population, housing, and employment projections establish patterns of expected future development. The land use section, in particular, serves as a guide for reviewing private development proposals and for making decisions on the location of public facilities.

POPULATION ESTIMATES AND FORECAST

Table II-1 contains population counts, estimates, and projections for the City of Crystal Springs. The forecast are in ten-year increments from 1970 to the Comprehensive Plan target year 2035. The current (2009) population estimate is 6,026. The forecast for the City were generated using a linear regression technique. The forecast assume that past growth trends will continue into the future. They do not assume that this growth will be confined to within the city limits. Naturally, as the city grows, the geographic area considered to be part of the city will grow.

TABLE II-1
POPULATION ESTIMATES AND FORECAST

YEAR	COPIAH COUNTY	CITY OF CRYSTAL SPRINGS
1970	24,764	4,195
1980	26,503	4,902
1990	27,592	5,643
2000	28,757	5,873
2010	29,840	6,237
2020	30,982	6,648
2030	32,124	7,058
2035	32,695	7,264

SOURCE: U.S. Census Bureau and CMPDD

POPULATION CHARACTERISTICS

The following population characteristics are based on the 2000 U.S. Census. According to the 2000 U.S. Census, the study area's population was 55% black and 43% white. This racial makeup is similar to Copiah County's makeup of 51% black and 47% white. The largest percentage of workers are in the manufacturing and retail trade industries and in 2000 the median household income was $23,846. The following tables depict these demographics.

TABLE II-2
2000 POPULATION BY RACE

RACE	POPULATION	PERCENTAGE OF TOTAL
BLACK	3,275	55%
WHITE	2,525	43%
OTHER	73	2%

SOURCE: U.S. Census Bureau

TABLE II-3
SEX AND AGE OF POPULATION

SEX AND AGE	NUMBER	PERCENT
MALE	2,717	46.3
FEMALE	3,156	53.7
UNDER 5 YEARS	414	7.0
5 TO 9 YEARS	419	7.1
10 TO 14 YEARS	460	7.8
15 TO 19 YEARS	629	10.7
20 TO 24 YEARS	435	7.4
25 TO 34 YEARS	774	13.2
35 TO 44 YEARS	770	13.1
45 TO 54 YEARS	708	12.1
55 TO 59 YEARS	252	4.3
60 TO 64 YEARS	198	3.4
65 TO 74 YEARS	387	6.6
75 TO 84 YEARS	323	5.5
85 YEARS AND OLDER	104	1.8
MEDIAN AGE (YEARS)	**32.2**	(X)

SOURCE: U.S. Census Bureau

TABLE II-4
EDUCATIONAL ATTAINMENT
Population 25 Years and Over (3,558)

EDUCATIONAL ATTAINMANT	NUMBER	PERCENT
LESS THAN 9TH GRADE	339	9.5
9TH TO 12TH GRADE, NO DIPLOMA	904	25.4
HIGH SCHOOL GRADUATE	979	27.5
SOME COLLEGE, NO DEGREE	671	18.9
ASSOCIATE DEGREE	208	5.8
BACHELOR'S DEGREE	394	11.1
GRADUATE OR PROFESSIONAL DEGREE	63	1.8

SOURCE: U.S. Census Bureau

TABLE II-5
HOUSEHOLD INCOME

INCOME	**HOUSEHOLDS**	**PERCENT OF TOTAL**
Less than $10,000	494	23.0
$10,000 to $14,999	280	13.0
$15,000 to $24,999	311	14.5
$25,000 to $34,999	332	15.5
$35,000 to $49,999	306	14.3
$50,000 to $74,999	209	9.7
$75,000 to $99,999	143	6.7
$100,000 to $149,999	43	2.0
$150,000 to $199,999	7	0.3
$200,000 or more	21	1.0

SOURCE: U.S. Census Bureau

TABLE II-6
EMPLOYMENT BY INDUSTRY

INDUSTRY	NUMBER	PERCENT
AGRICULTURAL, FORESTRY, FISHING, HUNTING AND MINING	68	3.2
CONSTRUCTION	107	5.1
MANUFACTURING	496	23.5
WHOLESALE TRADE	137	6.5
RETAIL TRADE	233	11.1
TRANSPORTATION, WAREHOUSING AND UTILITIES	168	8.0
INFORMATION	50	2.4
FINANCE, INSURANCE, REAL ESTATE, RENTAL AND LEASING	138	6.5
PROFESSIONAL, SCIENTIFIC, MANAGEMENT, ADMINISTRATIVE AND WASTE MANAGEMENT	66	3.1
EDUCATIONAL, HEALTH AND SOCIAL SERVICES	341	16.2
ARTS, ENTERTAINMENT, RECREATION, ACCOMMODATION AND FOOD SERVICES	147	7.0
OTHER SERVICES (EXCEPT PUBLIC ADMINISTRATION)	91	4.3
PUBLIC ADMINISTRATION	65	3.1

SOURCE: U.S. Census Bureau

EXISTING LAND USE METHODOLOGY

The land use survey is traditionally the most important survey of the planning process. This survey is a field "windshield" survey conducted in Crystal Springs and the surrounding study area. The field work was recorded on a base map and aerial photographs, and each parcel was coded according to its present land use and then transferred to a large base map, which is divided into the following categories:

1. Low-density residential (1-3 dwelling units per acre)
2. Medium-density residential (4-6 dwelling units per acre)
3. High-density residential (7-10 dwelling units per acre)
4. Public-Quasi-Public (schools, churches, libraries, parks, public buildings, etc.)
5. Mixed Residential Uses
6. Residential Manufactured Homes
7. Limited Commercial (offices, medical clinics, etc.)
8. General Commercial (indoor commercial uses)
9. Highway Commercial (primarily commercial uses with outdoor storage)
10. Light Industrial (uses with little noise, bad odors, or other objectionable characteristics)
11. Heavy Industrial (uses with objectionable characteristics)
12. Agricultural/Open Space

The existing land use map shows present land use patterns and provides a basis for the development of the future land use plan and future zoning map.

THE LAND USE PLAN

Overview

The land use plan represents a composite of all the elements of the planning program. With this context, the plan depicts in narrative, statistical and map forms the general relationships between land use patterns, major transportation arteries, schools, parks and other community facilities, and the overall environment of the community. Preparation of the land use plan was closely coordinated with the development of all other elements of the planning program, particularly the population and economic study, the transportation plan, and the community facilities plan.

The land use plan should be used primarily as a general and long range policy guide to decisions concerning future land development. The adoption of these policies by the Mayor and Board establishes their dominance as a guide for land use decisions, and that they may change only by amending the plan. The land use plan shall also be used as a forecast of the future land needs of the city. Although the land use forecasts are for 20 to 25 years in the future, the life expectancy of the land use plan, for accuracy and applicability is five to six years. This emphasizes the need to revise the plan every five years.

The plan is not a legal tool; however, because it forms the basis for the zoning ordinance, the subdivision regulations and other implementation documents, it does carry some legal weight. The plan should serve as a guide for consideration of amendments to the Zoning Ordinance, the Official Zoning Map, the Subdivision Ordinance, the public improvements program and capital improvements budget. The land use plan map is intended to indicate broad categories of development for general areas of the city. In order to be useful to zoning, the land use map attempts to delineate exact boundaries wherever possible.

Methodology

This section of the Comprehensive Plan was developed using three processes involving plan formulation and evaluation. First, the spatial distribution of Crystal Springs' future land uses was made after applying specific locational criteria. Second, the amount of land allocated for future land uses was correlated with existing growth patterns. Last, a physical plan for future growth was developed, which attempts to use city resources and meet city needs in an effective and efficient manner. Also the City of Crystal Springs' Wellhead Protection Area Management Plan was considered in the planning process in order that we not plan for any additional hazardous land uses in the protected areas.

The quantities of land needed to accompany various activities in an urban area depend on a multitude of interrelated factors. The most important of these factors are the composition and the characteristics of the population, the economy of the area and the trends in the density of development. Since all three of these factors are closely related, a change in one will cause a corresponding change in the other two. For example, the density of development is dependent, to a large degree, on raw land and development cost (economic factors). Therefore, if these costs increase, the density of the development usually increases, unless the costs are offset by a corresponding increase in income, sales or other economic factors. Although there are numerous methods and techniques used to forecast demands for the future land uses in urban areas, all of these techniques rely, directly or indirectly, on estimates of these factors.

The future land use plan, in order to be useful as a policy tool for guiding land use decisions, must be carefully composed. In drafting the Land Use Plan Map, the following factors were considered:

1. Existing land use patterns and growth trends
2. Projected future land use needs based on projected future population and employment converted to the number of acres needed to accommodate projected growth levels
3. Flood plains, excessive slopes (over 12 percent), and soil types
4. Location of major streets and open space

Location Criteria

Locational criteria are guiding principles and standards used in the placement of activities on the

land. These principles and standards have evolved over time within the planning profession and are recognized for their universal application. These criteria involve numerous considerations including danger from floods and other health and safety standards, the vulnerability of important environmental processes to urban activities, the proximity of one land use from another in time, distance and cost, the social, economic and environmental compatibility of adjacent land uses, physical characteristics of individual locations and their suitability for development and the pattern of land values. General principles relating to the location of land uses customarily identify five major functional areas: the work areas, the living areas, the shopping and leisure time areas, the community facility systems and environmentally critical areas of land and water. These principles can be expressed as follows:

1. **Work areas** should be located in convenient proximity to living areas where energy efficient interconnecting transit and thoroughfare routes can be designed to insure easy access back and forth; they should be in convenient proximity to other work areas and where uses incidental to one another have access to interconnecting truck routes. The spatial distribution of work areas should harmonize with intra-urban patterns of firm interaction. Heavy concentrating of work areas should be avoided so as to disperse point sources of pollution. Some work areas should be in locations accessible to heavy transportation facilities and large capacity utility lines. Work area locations provide sites adequate in size, economic to develop and attractively situated for the particular uses intended.

2. **Living areas** should be located in convenient proximity to the work and leisure time areas and where there are nearby transit and thoroughfare routes to insure easy access. The spatial configuration of residential communities should take the activity and residential preference patterns of various categories of households into account. Living areas should be in convenient proximity to large open spaces and should include smaller open spaces, with residential areas within easy walking distance of community facilities. They should be located in areas protected from traffic and incompatible uses, in areas which are economic, energy efficient, and attractive to develop, and where desirable residential densities with a range of choice can be insured.

3. **Shopping areas** and entertainment centers such as shopping malls, restaurant areas, cultural centers and educational complexes should be in convenient proximity to living areas. They should be in centrally located areas and on sites adequate for their purposes.

4. **Community facility** systems should be designed around the underlying service-delivery concepts of each such system and its program, with service levels appropriate to the user groups of each facility. Recreational facilities, schools, libraries, medical care facilities, police and fire stations, and other community facilities should be in locations convenient to user groups and on sites economic to develop.

5. **Open space system and environmental protection** Major parks and large open

spaces should be located so as to take advantage of, as well as protect, natural processes and unusual landscape features and to provide for a variety of outdoor recreational and other activities. Environmentally critical areas of land and water should be protected from incompatible uses and from pollutants generated by urbanization in the vicinity. Wooded areas that serve a functional purpose in climate, noise, light, and pollution control should be preserved as part of an urban forest and open space system. Vulnerable urban development should not be located in areas of natural hazards to life and property such as floods, slides and unstable soils. Development using on-site sewage treatment should be prohibited from areas of unsuitable soil and geological conditions. Present and future water supply drainage basins should receive only urban development compatible with protection of the water quality.

Land Use Plan Map

In order for the zoning map to be optimally effective, it should closely mirror the Land use Plan Map. In addition to the land use map, other considerations in drawing the zoning map are:

1. How many sets of districts shall there be?
2. How much space should be allocated to each type of district?
3. What types of land are suitable for each type of district?
4. What should be the typical relationships between various types of districts?
5. Where should the various districts be located, in general?
6. Where should the exact boundary lines of each district run?

In mapping zoning districts, there is usually a compromise between the distracting pattern dictated by existing development and that called for by the land use plan. The land use plan becomes a guide for this decision making process, as well as for the deliberations to be followed in making later amendments to the zoning ordinance. Generally, zoning districts reflect certain principles as follows:

1. Compatibility of use
2. Appropriateness of the land
3. Locational needs of uses
4. Public Service effects

As a general rule, it is more advisable to run the boundaries of a district along or parallel to rear lot lines, rather than through the center of a street. Where one side of a street is zoned for business and the other for residential use, there is a strong temptation for legislative bodies and courts to authorize business uses on the residential side of the street. Where a district runs parallel to side lot lines it should avoid splitting lots. Land situated similarly should be zoned alike. Care should also be taken that not too many non-conforming uses are created in each district.

Explanation of Land Use Categories

The Crystal Springs Land use Plan categorizes future land uses in the following manner:

1. Low density residential
2. Medium density residential
3. High density residential
4. Residential manufactured homes
5. Limited commercial - office uses, etc.
6. General commercial - indoor commercial uses
7. Highway commercial - outdoor commercial uses
8. Light industrial
9. Heavy industrial
10. Agricultural/rural
11. Flood plains

The following is an explanation of the specific meaning of land use and thoroughfares color codes depicted on the Land use Plan/Thoroughfares Plan Map contained in this report:

AGRICULTURAL/RURAL (White): Maximum development of one residential unit for every three acres.

> This land use classification depicts areas that are expected to remain rural or agricultural with no significant concentrations of residential, commercial, industrial or other development. These areas of the Land Use Plan are not expected to be served by municipal sewer service within the next 25 years (by the year 2035).

RESIDENTIAL ESTATE (light green): Maximum density of one single family detached residential per every two to three acres.

> This land use classification is intended to promote development of large, residential estate size lots with a minimum lot size of one acre and a minimum floor area of 2,200 square feet. These areas on the Land Use Plan may or may not be served by a municipal sewer system within the next 25 years; therefore, the large lot size is needed to provide ample space for discharge from individual on site wastewater systems.

LOW DENSITY RESIDENTIAL (yellow): Maximum density of three single family detached residences per acre.

> This land use classification is intended to promote the development of single family detached dwellings on relatively large lots (approximately 10,000 square feet).

MODERATE DENSITY RESIDENTIAL (gold): Maximum density of five single family detached residential units per acre.

> This land use classification allows the development of single family detached dwellings on

moderate size lots (at least 8,500 square feet). This category includes the type of single family residence known as patio homes and also townhouses.

HIGH DENSITY RESIDENTIAL (orange): Maximum density of ten dwelling units per acre.

This land use classification allows the development of apartments or condominiums on arterial streets/roads or highways which have the capability of carrying higher traffic volumes generated by these higher density residences.

LOW INTENSITY COMMERCIAL (light pink): Restricted Commercial.

These areas should include: business and professional offices; personal services such as hair styling shops and photographic portrait studies; instructional services such as dance studios; floral shops; and other similar uses that do not generate high vehicular traffic (more than 70 average daily trips per 1,000 square feet of Gross Floor Area) or high noise levels (i.e., exceeding a DNL or average "Day Night Level" of 65 decibels).

GENERAL COMMERCIAL (red): Enclosed Commercial Activities Only.

These areas should include businesses in which the principal activity is conducted indoors. However, certain land uses that involve some outdoor activities could be permitted in these areas. This land use classification would include shopping centers as well as independent commercial uses.

HIGH INTENSITY COMMERCIAL (purple): All Commercial Activities.

This classification would encompass all types of commercial uses, including outdoor commercial activities.

LIMITED INDUSTRIAL (light gray): Enclosed Industrial Activities Only.

This classification includes manufacturing and warehousing uses conducted primarily indoors. These manufacturing uses are those that do not generate noise, vibration or offensive odors detectable to human senses off the premises.

HEAVY INDUSTRIAL (dark gray): All industrial uses, including outdoor.

This classification includes manufacturing uses where all or part of the associated activities are conducted outdoors, or where the use requires large volumes of water or generates noise, vibration, etc., detectable off the premises.

PARKS AND OPEN SPACE (medium green):

This land use classification includes all existing and proposed parks, ballfields, bicycle/pedestrian trails and other similar uses.

PUBLIC/QUASI PUBLIC USES (dark green):

This land use classification includes all existing and proposed public/quasi-public uses such as churches, schools, governmental buildings and facilities, cemeteries, etc.

100 YEAR-FLOOD PLAIN (light blue pattern):

These areas are shown on the latest available Federal Insurance Administration "Flood way: Flood Boundary and Flood way Map" as 100-year flood plain (i.e., subject to a one percent chance of flooding in any year).

RECOMMENDATIONS

1. Development of upscale apartment communities should be encouraged. This would provide a much needed housing alternative and may help to lessen the request for manufactured housing in non-conforming areas such as single family residential.

2. Development of new single-family residential subdivisions should be encouraged.

3. The city's Wellhead Protection Area Management Plan should be considered before any amendments to the Land Use Plan or rezoning can take place.

4. The city should consider the development and adoption of an Architectural Review Ordinance that would address commercial, industrial and multi-family developments.

5. The city should consider adopting the International Building Code and International Property Maintenance Code.

6. The city should review and update the current zoning regulations.

TRANSPORTATION

This plan categorizes the streets/roads (highways, arterials, and collectors) in Crystal Springs and indicates improvements to many of them. The City of Crystal Springs recognizes the important relationship between land uses and transportation. Various community activities such as shopping and employment centers, schools, and high density residential development generate large amounts of traffic. However, it is also true that the construction of major streets will create pressure for more intensive types of development. If designed properly, major traffic arteries connecting focal points or community activities will have better traffic flow and fewer accidents without passing through residential areas. The land use plan is valuable in helping make determinations between land uses and traffic routes.

In 2006 the Metropolitan Planning Organization (MPO) passed a resolution expanding the Metropolitan Planning Area (MPA) boundaries to include Copiah and Simpson counties. The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU),* passed by the U.S. Congress in 2005, allows MPO's to expand their MPA boundaries to encompass the entire Metropolitan Statistical Area (MSA). The Office of Management and Budget has expanded the boundaries of the Metropolitan Statistical Area to include Copiah and Simpson counties, primarily as a result of work trip commuting traffic from those counties.

Federal Transportation Planning regulations require that long-range area wide transportation plans be updated every five years in air quality attainment areas, and the area wide transportation plan must include those areas expected to become urban in character or "urbanized" by the horizon date of the plan. Thus, the MPA was expanded in order to permit MPO staff to perform advance planning for Copiah and Simpson counties in anticipation of the ultimate spread of the "urbanized area" to include portions of those counties.

Concurrently with preparation of the Land Use Plan for the Crystal Springs study area, the CMPDD developed a Thoroughfares Plan, classifying streets and highways according to the function that they can be expected to perform by the target year of 2030. According to the Federal Highway Administration (FHwA), "functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide" (Highway Functional Classification, U.S. Department of Transportation, July, 1974). The only controlled access highway in the Crystal Springs study area is Interstate 55; it is shown in blue on the Land Use/ Transportation Plan. The only State-maintained highways are Highways 51 and 27 shown in red. All city and county-maintained thoroughfares are classified using the traditional groupings: principal arterial, minor arterial and collector; by definition a "local" street is not a thoroughfare.

The following are FHwA definitions of each classification:

1. Principal Arterials (red): This system of streets serves the major centers of activity, has some of the highest traffic volumes and the longest trip desires.

2. Minor Arterials (green): The minor arterial street system interconnects with and augments

the principal arterial system. It provides service to trips of moderate length and contains facilities that place more emphasis on land access than the principal arterial system.

3. Collectors (brown): The collector street system provides land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. It distributes trips from arterials to their ultimate destinations.

RECOMMENDATIONS

1. Construct a frontage road on the west side of Interstate 55 extending from Pat Harrison Road to Highway 27.

2. Construct a collector road that would extend north and south connecting Six Mile Road to Lee Avenue.

3. Extend East Georgetown Street to connect with the above-mentioned collector road.

4. Extend Browntown Road to connect with the above-mentioned collector road.

5. Construct an interchange at Interstate 55 and Utica Road.

CHAPTER III

PUBLIC FACILITIES PLAN

HOUSING

Table III-1 shows a breakdown of housing in Crystal Springs by type and condition of structure. This information was gathered during the initial land use survey.

TABLE III - 1
RESIDENTIAL STRUCTURE COUNT
2009 EXISTING LAND USE SURVEY

Structure Type	Count
Sound Structure	1,561
Dilapidated Structure	75
Multi-Family Units	144
Manufactured Homes	219
Total:	**1,999***

Source: Central Mississippi Planning and Development District.
* Total does not include group quarters.

Based upon past trends, the future housing needs of the City of Crystal Springs can be forecasted. Based upon these forecast (see Table III-2) the city will need an additional 1,028 housing units by 2035. It is expected that the market forces of supply and demand as well as other economic factors such as local employment will dictate when housing is built.

TABLE III - 2
PROJECTED RESIDENTIAL HOUSING NEEDS

YEAR	OCCUPIED HOUSING UNITS	PERSONS PER OCCUPIED HOUSING UNIT	PROJECTED POPULATION	PROJECTED NUMBER OF HOUSING UNITS
1990	1,918	2.7		
2000	2,118	2.7		
2010		2.6	6,237	2,403
2020		2.5	6,648	2,629
2030		2.5	7,058	2,867
2035		2.4	7,264	3,027

Source: U.S. Census Bureau and CMPDD

SCHOOLS:

Introduction

The schools located in Crystal Springs are part of the Copiah County School District. The following schools are in the Crystal Springs Attendance Zone: Crystal Springs Elementary (Kindergarten – Grade 3), Crystal Springs Middle School (Grade 4 – Grade 8), and Crystal Springs High School (Grade 9 – Grade 12). Table III-3 shows the enrollment figures for Crystal Springs Attendance Zone.

Current plans include the construction of a softball field and baseball field, installation of an elevator in the high school 3-story building and installation of drop ceilings and energy efficient lighting in the high school building.

TABLE III-3
COPIAH COUNTY SCHOOL DISTRICT
CRYSTAL SPRINGS ATTENDANCE ZONE
ENROLLMENT

School	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
CSES	610	612	585	584	580	590
CSMS	836	839	815	765	718	672
CSHS	457	434	473	475	483	553
Total:	1,903	1,885	1,873	1,824	1,781	1,815

SOURCE: Copiah County School District

FIGURE 5: CRYSTAL SPRINGS HIGH SCHOOL

PARKS AND RECREATIONAL FACILITIES:

Introduction and Methodology

As with other sections of this *Public Facilities Plan*, the approach taken in the evaluation of Crystal Springs' needs in terms of parks/recreational facilities and open space is to apply accepted standards to the current supply and projected 2035 needs. The 2035 needs are based upon the population projections prepared by Central Mississippi Planning and Development District. In this case, the standards used are contained in the *Mississippi State Comprehensive Outdoor Recreation Plan* (SCORP), which was updated by the Mississippi Research and Development Center in the mid-1980s. SCORP contains "prototype standards" for various classifications of parks and facilities, and these prototype standards are based upon acres or units needed for every 1,000 persons.

Prototype Standards

The SCORP contains prototype standards for eight classifications of parks/recreational facilities

and open space facilities. However, the first two classifications, "playlots" and "neighborhood playgrounds," are not included in this evaluation of future needs. "Playlots" are parks that are intended for use by young children and are generally located at an elementary school. "Neighborhood Playgrounds," which are usually intended for both pre-school and school-age children are also commonly located on a public school site. Therefore, for the purposes of this plan, it is assumed that most of the city's needs for playlots and neighborhood playgrounds will be met through the use of public school facilities.

The prototype standards for other SCORP classifications are as follows:

Neighborhood Parks

Description: Neighborhood parks provide a variety of recreational opportunities, both passive and active, potentially organized or unorganized for all age groups.

Facilities: Neighborhood parks usually include children's play apparatus, paved multipurpose courts, sports fields, small picnic areas and shelters, drinking fountains, walking/jogging or nature trails, and off-street parking and lighting.

Minimum Population Served: 5,000

Acres per 1,000 persons: 3.5 acres for every 5,000 persons in the service area.

Service Area: ½ mile in urbanized areas; 3 miles in rural areas.

Optimum Size: 5 to 7 acres.

Population Served: All ages.
Location: Neighborhood parks are usually located central to the population being served, without the need to cross arterial streets or highways. These parks are commonly located in an area characterized by some natural features.

Community Playfields

Description: Community playfields are large outdoor recreational areas -- primarily athletic complexes -- designed to serve competitive and recreational needs of children, pre-teens, teenagers, and adults. Playfields may provide a variety of organized activities and may have the potential to provide for competitive events and tournaments.

Facilities: The predominant facilities in this classification are athletic fields for sport such as soccer, football, baseball, etc. Playfields may also include court games such as tennis. Other potential facilities include lighting, sanitary facilities, concessions, storage areas, adequate parking, and spectator seating. Playfields may include some picnic facilities, shelters, children's play areas, and special purpose facilities such as a swimming pool.

Minimum Population Served: 10,000

Acres per 1,000 persons: 10 acres for every 10,000 persons in the service area.

Service Area: 5 miles in urbanized areas; 10 miles in rural areas.

Optimum Size: 10 to 15 acres

Population Served: Entire population of a community, focusing on ages 9 to 39.

Location: Playfields may be located on the outskirts of a community, or may be a portion of a "major community park." In areas around public schools, the physical education and athletic facilities may qualify to serve as community playfields. In rural areas, community playfields may be located in conjunction with other major outdoor recreational areas or facilities such as lakes and reservoirs.

Major Community Parks

Description: A major community park is a large natural and/or landscaped area, designed to accommodate large numbers of people for a wide variety of both intensive uses and passive pursuits. Major community parks provide facilities for both intensive uses and passive pursuits.

Facilities: There is almost no limit to the variety of facilities that may be found in the major community park, but these typically include such items as play equipment, picnic facilities, paths, trails, pavilions, zoos or museums, and golf or swimming facilities.

Minimum Population Served: 20,000

Acres per 1,000 persons: 20 acres for every 20,000 persons in the service area.

Service Area: 5 miles in urbanized areas; 10 miles in rural areas.

Optimum Size: 24 to 40 acres.

Population Served: All ages.

Location: In or near urbanized areas, major community parks area commonly located along an unusual land feature such as floodplains, rivers, or lakes. In rural areas, a major community park may be a county park.

FIGURE 6: CHAUTAUQUA PARK

Single or Special Purpose Facilities:

Description: The chief characteristic of a single/special purpose recreational facility is usually uniqueness or singleness of purpose. These include an unlimited variety of facilities providing individual as well as group activities.

Facilities and Standard per 1,000 persons:

- Baseball diamonds: (regulation 90 feet) 1 for every 6,000 persons
- Softball diamonds: 1 for every 3,000 persons.
- Tennis courts: (best in battery of four) 1 court for every 2,000 persons
- Soccer fields: 1 for every 4,000 persons
- Basketball courts: 1 for every 1,000 persons

- Swimming pools (25 yard): 1 for every 10,000 persons
  Swimming pools (50 yard): 1 for every 30,000 persons

- Neighborhood centers: 1 for every 10,000 persons
  Community centers: 1 for every 25,000 persons

- Golf courses (18 hole): 1 for every 25,000 persons

- Walking/bicycle trails: 1 for every 5,000 persons

Service Area: Generally limited to serving a population within ½ hour travel time of the facility.

Population served: All ages.

Location: Single/special purpose facilities may be located in other types, but should be as central and convenient to the users as possible.

Urban Greenspace or Open Space

Description: Urban greenspace or open space includes areas provided mainly for their aesthetic and/or environmental enhancement qualities. They may be used for passive or active recreational activities, festivals, special observances/occasions, or other community activities.

Facilities: Urban greenspace or open space can include various possibilities and combinations such as natural wooded or open lands (fields), floodplains, river corridors, stream banks, parkways, street medians and sholderways, areas around public buildings, town squares, etc. Improvements may include bicycle trails and bicycle racks, hiking or nature trails, or bridle trails.

Acres per 1,000 persons: .75 to 1 acres per 1,000 persons.

Service Area: Variable, may service primarily people living in a particular area such as a neighborhood or subdivision, or may service anyone passing through an area.

Optimum Size: Variable, may range from a few feet, as in the case of floral areas, to several hundred acres, as in the case of a floodplain.

Population Served: All ages.

Location: The location of urban greenspace or open space often depends on the availability of land and water resources. Open space may be a part of a park system or serve as linkage ways between recreation areas and facilities. It may be viewed as part of an urban beautification program or downtown revitalization effort, or it may be part of easements such as electrical powerline or gasline easements (a “linear park”).

Regional Parks

Description: Regional Parks serve multiple governmental units and are usually administered by counties, regional bodies, or through other types of cooperative agency agreements. Regional parks serve both active and passive recreational needs for both day and overnight activities.

Facilities: Regional parks may contain picnic areas, nature centers, trail system, scenic drives, campgrounds, water areas for swimming, fishing and boating, golf courses, concession and sanitary facilities, athletic complexes, sports fields, single/special purpose facilities, and parking.

Minimum Population: 50,000.

Acres per 1,000 persons: 1,000 acres for every 50,000 persons.

Service Area: Multiple county, regional, and/or multiple city. Regional parks serve mainly persons located within one hour travel time of the park.

Optimum Size: 1,000 to 2,500 acres.

Population Served: All ages.

Location: The location of regional parks is largely dependent upon the availability of natural or manmade resources such as lakes and reservoirs.

Findings and Recommendations:

The City of Crystal Springs has the following public or semi-public recreational facilities:

- Chautauqua Park - located on Hwy 51 North, this park is 65 acres and includes trails, playground equipment, an outdoor classroom, amphitheater, historical sites, roundhouse pavilion, oriental garden, 1,550 ft. boardwalk, visitor center, tomato museum, art gallery and a 30 acre lake stocked with catfish, bass, bream, and crappie.

- Sports Complex - located at 308 Harmony Road, this complex is 20 acres and includes soccer fields, a softball field, 2 tennis courts, a volleyball court, indoor basketball goals, a weight/game room and a class room.

- McPhearson Field - located at the end of Railroad Avenue, this complex contains a regulation softball field, 2 sand volleyball courts, peewee football practice field and basketball courts.

- Lee Avenue Community Center - located on Lee Avenue, this complex contains an Olympic size pool, a separate baby pool, and a full kitchen area. This complex is available for rental.

- Chautauqua Visitor Center - located adjacent to Chautauqua Park, this facility includes a meeting room accommodating approximately 150 people.

- James L. Hicks Civic Center – located at 101 Saul Street, this facility provides senior citizens activities five (5) days a week and includes a full kitchen, playground and basketball courts.

- Rail Road Park – Located in downtown Crystal Springs includes a gazebo and war veteran's memorial.

The City of Crystal Springs has the following activities available:

swimming lessons	senior citizens activities
tennis	day camp
boy scouts	karate
water aerobics	aerobics
soccer	basketball
football	softball
baseball	volleyball

Table III-4 depicts current demand and estimates of the year 2035 demand for recreational areas and facilities for the City of Crystal Springs.

TABLE III-4
CURRENT AND FUTURE DEMAND FOR RECREATION AREAS AND FACILITIES

TYPE AREA/ FACILITY	**EXISTING POPULATION**	SERVICE POPULATION	EXISTING DEMAND	2035 POPULATION	SERVICE POPULATION	2035 DEMAND
Playlots	6,026	500	12	7,867	500	16
Neighborhood Playgrounds	6,026	2,500	2	7,867	2,500	3
Neighborhood Parks	6,026	5,000	1	7,867	5,000	2
Community Play fields	6,026	10,000	1	7,867	10,000	1
Baseball Diamonds	6,026	4,000	2	7,867	4,000	2
Softball Diamonds	6,026	2,000	3	7,867	2,000	4
Tennis Courts	6,026	2,000	3	7,867	2,000	4
Soccer Fields	6,026	4,000	2	7,867	4,000	2
Basketball Courts	6,026	1,000	6	7,867	1,000	8
Swimming Pools	6,026	10,000	1	7,867	10,000	1

TYPE AREA/ FACILITY	**EXISTING POPULATION**	SERVICE POPULATION	EXISTING DEMAND	2035 POPULATION	SERVICE POPULATION	2035 DEMAND
(25 yards)						
Neighborhood Centers	6,026	10,000	1	7,867	10,000	1
Jogging Trails	6,026	5,000	1	7,867	5,000	2
Urban Green-space and Open Space (acres)	6,026	1,000	6	7,867	1,000	8

SOURCE: Existing Population: Field survey, CMPDD, 2009.
2035Population Projections: Central Mississippi Planning and Development District

Crystal Springs has a great deal to offer and should try to attract state tournaments and competitions. The city currently host softball tournaments, a fall motorcycle rally, Environmental Education Day in April for all Copiah County 5th graders and Chautauqua Park is decorated and open for drive-through viewing every night between Thanksgiving and December 26th. The city also has summer swimming lessons and water aerobics as well as a summer Tomato Festival and 5K run.

The City of Crystal Springs has an above average number of Parks and Recreation facilities which creates a huge task of maintaining these facilities. To assist in the above suggestions, it is necessary to focus on maintaining and improving all facilities. Current plans include improving the Tomato Museum, adding additional signage to facilities, addition of a disc golf course at Chautauqua Park, and adding picnic tables, grills and water fountain to the James L. Hicks Civic Center.

PUBLIC BUILDINGS AND FACILITIES:

CITY HALL

The building which houses the Crystal Springs City Hall is located at 210 East Railroad and has a total of 5,391 square feet. It was built in 1978 and has served as City Hall since that time. The building includes the Mayor's office, the City Clerk's office, the office for two Deputy City Clerk's, a part-time janitor, a board room, and the Chamber of Commerce. The City Hall employees currently use 1,978 square feet of this space.

Based on the 2035 population projections, the current 1:1200 ratio of city employee to population combined with the architectural standard of 330 square feet per person, Crystal Springs should have approximately 7 city employees creating a need of 2,310 square feet. It is recommended to relocate the Chamber of Commerce leaving more room for the City Hall employees. It is further recommended to make necessary repairs and renovations.

FIGURE 7: CRYSTAL SPRINGS CITY HALL

FIRE PROTECTION

From a study of pertinent conditions and performance records over many years, certain fire protection standards have been developed. For each deviation from these standards, deficiency points are assigned, the number depending upon the importance of the item and degree of deviation. The total number of deficiency points charged against a county or municipality determines the relative classification -- one through ten. Table III-5 shows the fire protection "features" considered by the Mississippi State Rating Bureau in classifying a municipal or county fire protection system. Table III-6 indicates the Mississippi State Rating Bureau classifications assigned based on accumulated points of deficiency. Crystal Springs' current fire rating is seven.

TABLE III-5
RELATIVE VALUES AND MAXIMUM DEFICIENCY POINTS

FEATURE	PERCENT	POINTS
Water Supply	**39%**	**1,950**
Fire Department	**39%**	**1,950**
Fire Service Communications	**9%**	**450**
Fire Safety Control	**13%**	**650**
TOTAL	**100%**	**5,000**

TABLE III-6
RELATIVE CLASS AS DETERMINED BY POINTS OF DEFICIENCY

POINTS OF DEFICIENCY	CLASSIFICATION
0-500	FIRST
501-1,000	SECOND
1,001-1,500	THIRD
1,501-2,000	FOURTH
2,001-2,500	FIFTH
2,501-3,000	SIXTH
3,001-3,500	SEVENTH
3,501-4,000	EIGHTH
4,001-4,500	NINTH
MORE THAN 4,500	TENTH

SOURCE: *Grading Schedule for Municipal Fire Protection*; New York, N.Y.: Insurance Services Office, 1974: pp. 2-3.

Findings and Recommendations

The fire station is located at 202 South Jackson Street. There is 3500 square feet used by 3 full-time and 32 volunteer firefighters. There are overflow offices housed within City Hall.

According to the Fire Rating Bureau, the ideal service area for a fire station is a two-mile radius around the station. Applying this standard to the present corporate limits and the path of growth for Crystal Springs, a fire station should be added in the northwest portion of the city. With the addition of a new fire station, it is recommended to hire approximately three new full-time personnel. Consideration should be given to placing this new fire station on the west side of Hwy

51, north of town. This fire station could be combined with a recommended police precinct office.

Further recommendations:

- Encourage the physical and technical training of firefighters.
- Upgrade radio systems to an inter-optic multi-jurisdictional system.
- Add additional space for offices, parking and secure storage of equipment.
- Add and improve warning sirens for better coverage.
- Add ladder truck.
- Add portable generators and shelter space.
- Add decontamination showers and washers and dryers.
- Add ice machine.

FIGURE 8: CRYSTAL SPRINGS FIRE STATION

POLICE

The City of Crystal Springs currently has a police force of 15 sworn personnel. This includes the chief, lieutenant, sergeant, firearms instructor, and two part-time officers. Also, 7 civilian employees, including the dispatchers and one court/police clerk are employed at the police station. The current police station is a 5,865 square foot building. The City has no jail facilities but pays a fee to Copiah County Detention Center for the use of their facilities.

The Southeast average is 2.8 officers per 1000 residents and the national average is 2.3 officers per 1000 residents. Using the Southeast average of 2.8 officers per 1000 residents creates a projected need of 22 officers for the year 2035. Based on the current ratio of one civilian employee per 2 officers, the projected need is 11 civilian personnel creating a total of 33 employees. Using the architectural standard of 330 square feet for each employee, the projected building space need is 10,890 square feet. Renovations and repairs to the police station including adding a door to the courtroom and meeting ADA (Americans with Disabilities Act) requirements are currently being done with the assistance of the Small Municipalities and Limited Population Grant Program.

To alleviate the space deficit and to provide for newly annexed areas, it is recommended to place a precinct station on the west side of Hwy 51, north of town. This precinct could be included in a partnership with the recommended fire station.

Further recommendations:

- Encourage technical and physical training for officers.
- Obtain an emergency generator.
- Increase personnel as needed.

FIGURE 9: CRYSTAL SPRINGS POLICE STATION

LIBRARY NEEDS

The Crystal Springs library branch, located on South Jackson Street, is part of the Copiah-Jefferson County Library System. The library underwent additions and renovations between 1999 and 2001 when 2,500 square feet was added. The Crystal Springs branch is supported financially by the City of Crystal Springs as well as Copiah and Jefferson Counties.

The CMPDD evaluated both the current (2009) adequacy of the library system and the future year 2035 needs of the system in terms of accepted standards used by the American Library Association (ALA) and "experience formulas" developed through comparisons of libraries having similar size service areas as compared to the Crystal Springs branch. Table III-7 reflects the ALA standards for minimum size of book collection and minimum building space requirements according to the population of the service area. Table III-8 reveals experience formulas which are useful in determining how the Crystal Springs library "measures up" against libraries in circulation and size expressed as total square footage.

TABLE III-7
GUIDELINES FOR DETERMINING BOOK STOCK NEEDS
AND
MINIMUM SPACE REQUIREMENTS

Service Area Population	Size of Book Collection	Minimum Total Floor Space
Under 2,499	10,000 volumes	2,000 square feet
2,500-4,999	10,000 volumes plus 3 books per capita for population over 3,500	2,500 square feet or 0.7 square feet per capita, whichever is greater
5,000-9,999	15,000 volumes plus 2 books per capita for population over 5,000	3,500 square feet or 0.7 square feet per capita, whichever is greater
10,000-24,999	20,000 volumes plus 2 books per capita for population over 10,000	7,000 square feet or 0.7 square feet per capita, whichever is greater
25,000-49,000	50,000 volumes plus 2 books per capita for population over 25,000	15,000 square feet or 0.6 square feet per capita, whichever is greater

Source: American Library Association

TABLE III-8
EXPERIENCE FORMULAS FOR BOOK STOCK, CIRCULATION AND SIZE

Population Served	Book Stock: Volumes Per Capita	Circulation: Volumes Per Capita	Size: Square Footage Per Capita
Under 10,000	3.5 to 5.0	10	.7 to .8
10,000-35,000	2.75 to 3.0	9.5	.6 to .65
35,000-100,000	2.5 to 2.75	9.0	.5 to .6
100,000-200,000	1.75 to 2.0	8.0	.4 to .5

Source: Joseph Wheeler and Hebert Goldhor, Practical Administration of Public Libraries: (New York: Harper and Row, 1982).

TABLE III-9
DETERMINATION OF CURRENT YEAR LIBRARY NEEDS
USING EXPERIENCE FORMULAS FOR BOOK STOCK, CIRCULATION AND SIZE
AND AMERICAN LIBRARY ASSOCIATION MINIMUM STANDARDS

2009 Study Area Population	6,026
2009 Book Stock	21,000
Book Stock for Libraries with similar size service areas (by Experience Formulas)	30,130
2009 Book Stock need Crystal Springs (by ALA Standards)	17,052
2009 Book Stock Deficit/Surplus (by Experience Formulas)	-9,130
2009 Circulation	58,000
Circulation for Libraries with Similar Size Service Areas (by Experience Formulas)	60,260
Size of Building (in square feet)	7,000
Size Compared with Libraries of Similar Size Service Areas (in square feet)	4,821
Size Deficit/Surplus When Compared With Similar Size Service Areas (in square feet)	+2,179

Source: - CMPDD: 2009 Dwelling Count and Estimates
- Book Stock Circulation and Building Size Information: Copiah-Jefferson Regional Library System
- Standards: American Library Association
- Experience Formulas: Joseph Wheeler and Herbert Goldhor, Practical Administration of Public Libraries, (New York: Harper and Row, 1982).

Findings and Recommendations:

Table III-9 indicates the present library needs in terms of book stock and building size for the Crystal Springs library according to the 2009 population of the study area as defined by the CMPDD. Using the Experience Formulas, the branch currently has a book stock deficit of 9,130 a building size surplus of 2,179 square feet.

The needs of the Crystal Springs Library System were projected to the year 2035 and are presented in Table III-10. Using the Experience Formulas, the branches book stock will have a projected deficit of 18,335 books and a projected space surplus of 706 square feet by 2035. Furthermore, it is recommended for the Crystal Springs Library to focus on keeping the current book stock up-to-date, encouraging internet access, and employing qualified personnel.

Current needs include roof repair and replacement of warped exterior boards.

TABLE III-10
DETERMINATION OF YEAR-2020 LIBRARY NEEDS FOR BOOK STOCK AND BUILDING SIZE USING AMERICAN LIBRARY ASSOCIATION STANDARDS

2035 Projected Service Population	7,867
2035 Book Stock Need (by Experience Formulas)	39,335
2035 Book Stock Deficit/Surplus	-18,335
Minimum Square Feet for a Library Serving this Size Population in 2035 (Experience Formulas)	6,294
Size Deficit/Surplus when Compared with Experience Formulas in 2035 (in square feet)	+706

Source: - CMPDD: 2009 Dwelling Count and Estimates
- Book Stock Circulation and Building Size Information: Copiah-Jefferson Regional Library System
- Standards: American Library Association
- Experience Formulas: Joseph Wheeler and Herbert Goldhor, Practical Administration of Public Libraries, (New York: Harper and Row, 1982).

FIGURE 10: CRYSTAL SPRINGS LIBRARY

UTILITIES AND DRAINAGE

SEWAGE

Sewer service is provided by the City of Crystal Springs. The Spray Irrigation Plant is located in the southeast corner of the City at 4161 Mathis Road. The current capacity of the plant is 0.999 MGD.

Recommendations:

- Establish a treatment and maintenance plan for grease.
- Add aerators and upgrade north lagoon at Chautauqua Park.
- Upgrade the current plant or add an additional plant to accommodate newly annexed areas.
- Correct known inflow/infiltration problems.
- Upgrade and improve old problematic sewer lines.
- Extend sewer service to Didlake, and Chautauqua Ridge.

WATER

The City of Crystal Springs has eight water wells and two elevated tanks. Following is the tanks listed by location and capacity.

LOCATION	CAPACITY
Hembree Road	250,000
Lee Avenue	250,000

Following is the water wells listed by location and gallons per minute pumped (gpm). The standard is 1 gpm per customer. Example: If there are 400 people served, there should be 400 gpm pumped.

LOCATION	GPM
N. Gem Plant	160
M. Gem Plant	116
S. Gem Plant (currently down)	174
Osborne Street	270
West Railroad Avenue (currently down)	300
Lincoln Street	250
Harmony Road	284
Six Mile Road	340
	1,894

Recommendations:

- Extend water service to newly annexed areas.
- Implement recommendations for the Wellhead Protection Plan.
- Replace water valves and fire plugs.
- Increase water line size in necessary areas.
- Increase GPM as necessary to serve growing population.
- Need two (2) water wells to replace the South Gem Plant and West Railroad Avenue wells.
- Upgrade the surface pumps.
- Add an additional elevated tank.

DRAINAGE

The City of Crystal Springs depends on ditches for storm drainage. The greatest problem is the erosion caused by drainage.

Recommendations:

- Clean ditches of stream channels.
- Create rip-rapping and channelization of areas with frequent flooding.
- Remove trees and slope banks.
- Enlarge culverts and bridges.