# The Town of Paonia Source Water Protection Plan



Delta County, Colorado August 2010

> Written by Kimberly Mihelich Source Water Specialist Colorado Rural Water Association For the community water provider: Town of Paonia: ID # CO0115601

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# **EXECUTIVE SUMMARY**

The Town of Paonia values a clean, high quality drinking water supply and decided to work collaboratively with area stakeholders to develop a Source Water Protection Plan to protect our water sources, several springs located within the North Fork of the Gunnison River watershed. During the months of October 2009 to June 2010, six stakeholder meetings were held in Paonia, Colorado to encourage local public participation. The planning process attracted interest and participation from 13 people including local citizens, water operators, and government representatives. This group comprised the Paonia Planning Team (the Planning Team or Team).

The Team initially reviewed the Source Water Assessment completed by the Colorado Department of Public Health and Environment (the State). The Assessment included the delineation of the source water protection area, potential sources of contaminants, and the susceptibility of these contaminants to degrade the water source. Using this information as a starting point, the Team requested a re-delineation of the protection area to include areas not included in the State's Assessment. The delineated source water protection area defines the region where the Team has chosen to implement our source water protection measures to reduce source water susceptibility to contamination.

To develop our management approach, the Planning Team focused on the following issues of concern within the Source Water Protection Area: forest lands, agricultural practices, road miles, and future land use.

The Planning Team reviewed and discussed several possible management approaches that could be implemented within the protection area to help reduce the risks of potential contamination to the community's source water. Voluntary implementation of source water management approaches at the local level (i.e. county and municipal) applies an additional level of protection to the drinking water supply by taking preventive measures to protect the source water. The Planning Team established a "common sense" approach in identifying and selecting the most feasible source water management activities to implement locally. These management practices included in this Plan are recommended by the Team to reduce the risks of potential contaminants to the Source Water Protection Area and protect the drinking water sources for the community of Paonia.

At the completion of this plan, a Steering Committee was formed to oversee its implementation. Representatives from the town, water providers, community, and government agencies who participated on the Planning Team volunteered to serve on the Steering Committee and meet quarterly throughout the year. The first meeting of the Steering Committee was held on August 6, 2010. At this first meeting the Committee began discussing which management approaches to implement during 2010 and 2011.

The Colorado Rural Water Association's Source Water Protection Specialist, Kimberly Mihelich, helped facilitate the source water protection planning process. The goal of the Association's Source Water Protection Program is to assist rural and small communities served by public water systems to reduce or eliminate the potential risks to drinking water supplies through the development of Source Water Protection Plans, and provide assistance for the implementation of prevention measures.

# INTRODUCTION

The Town of Paonia recognizes the possibility of potential threats to its water supply. We realized that in order to protect our springs as the sources of our drinking water, we needed to develop a protection plan to prevent possible contamination of their source waters. Proactive planning and prevention are essential to both the long-term integrity of our water systems and limiting our costs and liabilities.

Table 1: Contact information	for the Town of Paonia
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PWSID	PWS Name	Name	Title	Address	City	ST	Zip	Phone
CO0114601	Town of Paonia	Neal Schwieterman	Mayor	214 Grand Ave.	Paonia	со	81428	907-527-4101
CO0115601	Town of Paonia	Scott Leon	Public Works Director	214 Grand Ave.	Paonia	со	81428	970-527-4101

# **Purpose of the Source Water Protection Plan**

The Source Water Protection Plan (SWPP) is a tool for Paonia to ensure clean and high quality drinking water sources for current and future generations. This Source Water Protection Plan is designed to:

- Create an awareness of the community's drinking water sources and the potential risks to water quality within the watershed;
- Encourage education and voluntary solutions to alleviate pollution risks;
- Promote management practices to protect and enhance our drinking water supply;
- Provide for a comprehensive action plan in case of an emergency that threatens or disrupts our community water supply.

Developing and implementing source water protection measures at the local level (i.e. county and municipal) will complement existing regulatory protection measures implemented at the state and federal governmental levels by filling protection gaps that can only be addressed at the local level.

# **Public Participation in the Planning Process**

Public participation is vitally important to the overall success of Colorado's Source Water Assessment and Protection (SWAP) program. Source water protection was founded on the concept that informed citizens, equipped with fundamental knowledge about their drinking water source and the threats to it, will be the most effective advocates for protecting this valuable resource. Local support and acceptance of the plan is more likely where local stakeholders have actively participated in the development of their protection plan.

During the months of October 2009 to June 2010, six stakeholder meetings were held at the Paonia Town Hall in Paonia, Colorado to encourage local public participation in the planning process. Local stakeholders were sent letters of invitation to participate with follow-up by postcards and email reminders of meeting dates. The source water protection planning process attracted interest and participation from 13 people including local citizens, water operators, and government representatives. Input from the following list of Planning Team participants was greatly appreciated.

Participant	Affiliation
Kimberly Mihelich	Colorado Rural Water Association
Eddy Balch	Colorado Rural Water Association
Steve Tuck	Colorado Division of Water Resources
Albert Borkowski	Paonia Ranger District
Scott Leon	Town of Paonia
Travis Loberg	Town of Paonia
Tricia Bliss	Town of Paonia
Francis Winston	Winston Water Works
Norm Smith	Landowner-Town of Paonia
Roberta Salk	Lamborn Dr. Water Association
Janelle Comer	South Lamborn Mesa Water
Ron Wist	West Paonia Water
Steve J. Kossler	Mt. Lamborn Rancher
Mark Roeber	West Elk Livestock Association
Todd Harding	Bear Paw Springs

Table 2: Town of Paonia Source Water Protection Plan participants

# **Protection Plan Development**

The source water protection planning effort consisted of public planning team meetings and individual meetings with water operators, government, and agency representatives. Information discussed at the meetings helped the Team develop an understanding of the issues affecting source water protection for the Paonia community. The Team then made recommendations for management approaches to be incorporated into a protection plan. In addition to the planning team meetings, data and other information pertaining to source water protection areas was gathered via public documents, internet research, phone calls, emails, and field trips to the protection area. A summary of the meetings is presented below.





PHOTO: KIMBERLY MIHELICH, CRWA

Table 3: Presentations and Planning Team Meetings

Date	Purpose of Meeting
10/12/09	First Planning Team meeting with presentation on the process of developing a Source Water Protection Plan for the Town of Paonia.
11/16/09	Second Planning Team meeting with discussion on the State's Source Water Assessment for the Town of Paonia including the State's inventory of potential sources of contamination and identification of issues of concern. Discussion about spring s not included in the States' delineation and the decision was made to request a redelineation of the Source Water Protection Area.
01/25/10	Third Planning Team meeting with continued discussion of delineation of the Source Water Protection Area. Discussion of issues and concern and potential management approaches to include in the Protection Plan.
03/29/10	Fourth Planning Team meeting with continued discussion of issues of concern and best management approaches to include in the Protection Plan
05/07/10	Fifth Planning Team meeting to review and edit the Draft Plan; appoint a Steering Committee
06/25/10	Sixth Planning Team meeting to review and finalize Source Water Protection Plan: set the date for the first Steering Committee meeting, and implement one of the action items of the Plan.
08/06/10	First Steering Committee Meeting

# **Steering Committee Members**

At the completion of this plan, a Steering Committee was formed to implement the management approaches of this Source Water Protection Plan. Members of the Planning Team volunteered to serve on the Steering Committee and meet quarterly throughout the year. The first meeting of the Steering Committee is scheduled for August 6, 2010. At this first meeting the Committee will develop an Action Plan for management approaches to implement during 2010.

Name	Affiliation
Scott Leon	Town of Paonia
Travis Loberg	Town of Paonia
Francis Winston	Winston Water Works
Steve Tuck	Colorado Division of Water Resources
Albert Borkowski	Paonia Ranger District
Kimberly Mihelich	Colorado Rural Water Association

Table 4: Steering Committee Members

# WATER SUPPLY SETTING

### Location

The Town of Paonia is a small community, covering an area of 0.8 square miles, and is located in Delta County on the western slope of Colorado. Delta County covers approximately 1,149 square miles and has a population of 27,834. Paonia is situated on the North Fork of the Gunnison River near the head of the North Fork Valley (Longitude - 38°52′03″N, Latitude - 107°35′33″W), an area about 150 miles southwest of Denver, Colorado's capital. The valley lies at the foot of Mount Lamborn and the Grand Mesa. This valley forms the North Fork of the Gunnison River watershed.

Figure 2: Location of Paonia in Delta County, Colorado



MAP: KIMBERLY MIHELICH, CRWA

# Topography

Delta County has unique and diverse land forms and a varied topography: flattop mesa and "adobe" badlands, river canyons, flat irrigated farm lands, and high mountain peaks. Elevations range from 4,750 feet in the Gunnison River Valley to well over 11,000 feet in the West Elk Mountains (Delta County Master Plan, 1996).

The majority of the source water protection area lies on Mount Lamborn adjacent to the West Elk Wilderness of the Gunnison National Forest. Mount Lamborn is about six miles southeast of the Town of Paonia and has an elevation of 11,396 feet. The West Elk Wilderness on the Gunnison National Forest is about 176,000 acres ranging from 7,000 to more than 13,000 feet. The Town of Paonia is located northwest of the source water protection area at an elevation of about 5,300 feet.





SOURCE: UNITED STATE GEOLOGICAL SURVEY

# **Physiography**

Physiographic regions are broad-scale subdivisions based on terrain texture, rock type, and geologic structure and history. Paonia's source water protection area lies at the edge of the Colorado Plateau province. The Colorado Plateau consists of a succession of plateaus and mesas that gradually cascade away from the mountains. This series of relatively horizontal plateaus has been dissected by rugged canyons associated with the state's river systems (Groundwater Atlas of Colorado, 2003). The Colorado Plateau is characterized predominantly by sedimentary rocks.

WYOMING Fort Sterling Collins MIDDLE BASIN ROCK Steamboat MTN Greeley Springs Colorado Piedmont 40 40 **High Plains** <sup>o</sup>Denver SOUTHERN Glenwood Springs PLAINS GREAT COLORADO ROCKY Grand o lunction Colorado Springs ATEAU MOUNTAINS Montrose Gunnison Pueblo Lamar -38 38 Alamosa Raton Basin Cortez Durango Trinidad Modified from Fenneman and Johnson, 1946 100 meter Digital Elevation Model from Dave Catts, U. S. Geological Survey 108 104° SCALE 1:3,000,000 100 Miles

Figure 4: Physiographic Provinces of Colorado (solid line - province boundary; dashed line - sub province boundary)

SOURCE: GROUND WATER ATLAS OF COLORADO

# Geology

The Town of Paonia's source water protection area is located in the southern Piceance Basin, which is part of the Colorado Plateau physiographic province. The Piceance Basin formed during the Laramide orogeny (70-40 million years ago) and is made up of Mesozoic and Cenozoic sedimentary rocks. The Laramide orogeny, along with subsequent uplift, deformation, and faulting in the Oligocene and Miocene (35-5 million years ago) influenced much of Colorado's present topography; creating block-faulted mountains, basins, and plateaus (Groundwater Atlas of Colorado, 2003).

Sedimentary rocks are formed by the deposition of material derived from the erosion of preexisting rocks as well as material of organic origin (Groundwater Atlas of Colorado, 2003). Sedimentary rocks in the source water protection area are predominately shales, siltstones, and sandstones of the Tertiary Mancos formation.



#### Figure 5: Generalized geologic map of Colorado

SOURCE: GROUNDWATER ATLAS OF COLORADO

### Climate

The climate of the Colorado Plateau physiographic province is semi-arid and generally has abundant sunshine, low relative humidity, large daily temperature variations, high to moderate winds, and little precipitation. The varied topography produces varied micro-climatic conditions. Valleys and basins between mesas may exhibit semi-arid, desert-like conditions, while alpine conditions can exist at the higher altitudes. At elevations below 9,000 feet, average annual precipitation ranges from about 8 to 18 inches, while mountain ranges receive in excess of 32 inches.

Winter and spring storms represent the majority of the precipitation in this region. Summer thunderstorms, although brief, can often be very intense, producing 20 to 40 percent of the annual precipitation (Groundwater Atlas of Colorado, 2003).

The Town of Paonia is located at an elevation of 5,680 feet. Paonia has a mild climate with warm dry summers and moderate winters. The mean annual precipitation is 15 inches per year, and the annual mean air temperature is 50.3 degrees Fahrenheit. The average growing season is 143 days.



#### Figure 6: Average annual precipitation in Colorado

SOURCE: GROUNDWATER ATLAS OF COLORADO

### Land Ownership and Use

Delta County encompasses about 740,000 acres or 1,157 square miles. 55% of the land is public land and managed by the Grand Mesa, Uncompany and Gunnison National Forest and the Uncompany Resource Area of the Bureau of Land Management. 330,900 acres of Delta County is privately owned. Most privately owned land is used for some sort of agricultural production – fruit orchards, row crops or pasture (Delta County Master Plan, 1996).

The majority of the Town of Paonia's Source Water Protection area lies within the Gunnison National Forest. This land is managed by the U.S. Department of Agriculture's Forest Service. Other portions of land are managed by the Bureau of Land Management. The rest of land within the protection area is privately owned land managed by Delta County.



Figure 7: Delta County Property Classification

SOURCE: DELTA COUNTY GEOGRAPHIC INFORMATION SYSTEMS DEPARTMENT

# WATER QUALITY SETTING

# Hydrology

The Town of Paonia receives its drinking water through several springs located on the face of Mount Lamborn. A spring is a naturally occurring water resource that is formed when the side of a hill, a valley bottom or other excavation intersects a flowing body of ground water at or below the local water table, below which the subsurface material is saturated with water. A spring is the result of an aquifer being filled to the point that water overflows onto the land surface.

Springs may be formed in any sort of rock. When water enters fractures in the underlying geology, it dissolves bedrock. When it reaches a horizontal crack or a layer of non-dissolving rock such as sandstone or shale, it begins to cut sideways, forming an underground stream. As the process continues, the water hollows out more rock, eventually admitting an airspace, at which point the spring stream can be considered a cave, a process that is thought to take tense to hundreds of thousands of years to complete.

The amount of water that flows from springs depends on many factors, including the size of the caverns within the rocks, the water pressure in the aquifer, the size of the spring basin, and the amount of rainfall (The Water Cycle-Springs).



Figure 8: Cross-section of spring hydrology

SOURCE: US GELOGOGICAL SURVEY

# **Drinking Water Supply Operations**

The Town of Paonia is a small community located in Delta County, Colorado, and is situated on the North Fork of the Gunnison River near the head of the North Fork Valley. The North Fork Valley sits at an elevation of 5,682 feet and lies at the foot of Mount Lamborn and the Grand Mesa and forms the North Fork of the Gunnison River watershed.

The Town of Paonia's has 785 households, a population of 1,497 residents, and a small town charm. As an incorporated town, its municipal affairs are governed by the Paonia Town Council. Paonia's water system provides drinking water to its town residents as well as 625 area residents outside of town limits.

The source waters for Paonia include multiple springs along the face of Mount Lamborn. The water is collected in spring boxes and transported to two treatment plants, Lamborn Plant and Clock Plant, where the water is filtered through pressure filters and bag filters followed by chlorination. The treated water from the Lamborn plant is stored in a two million gallon aboveground storage tank and the treated from the Clock plant is stored in a one million gallon below ground storage tank. The treated water is then delivered to Paonia and area residents via a network of underground pipes to 1,536 taps, of which 119 are commercial.

The average daily demand is 530,000 gallons. Peak usage during the summer is in July with an average of 760,000 gallons per day. The lowest usage month is in March with an average of 409,000 gallons consumed per day. The system has a capacity for providing 1,040,000 gallons per day. The Town of Paonia provides an Annual Drinking Water Quality Report to the public which provides information on the results of their water monitoring program. The 2009 report is available at the Paonia Town Office.

![](_page_15_Picture_5.jpeg)

Figure 9: View of Paonia from north

PHOTO: KIMBERLY MIHELICH, CRWA

# **OVERVIEW OF COLORADO's SWAP PROGRAM**

Source water assessment and protection came into existence in 1996 as a result of Congressional reauthorization and amendment of the Safe Drinking Water Act. The 1996 amendments required each state to develop a source water assessment and protection (SWAP) program. The Water Quality Control Division, an agency of the Colorado Department of Public Health and Environment (CDPHE), assumed the responsibility of developing Colorado's SWAP program. The SWAP program protection plans will be integrated with the existing Colorado Wellhead Protection Program that was established in amendments made to the federal Safe Drinking Water Act (SDWA, Section 1428) in 1986. Wellhead protection is a preventative concept that aims to protect public groundwater wells from contamination. The Wellhead Protection Program and the SWAP program have similar goals and will combine protection efforts in one merged program plan.

Colorado's SWAP program is a two-phased process designed to assist public water systems in preventing potential contamination of their untreated drinking water supplies. The two phases include the Assessment Phase and the Protection Phase as depicted in the upper and lower portions of Figure 11, respectively.

![](_page_16_Figure_3.jpeg)

Figure 10: Source Water Assessment and Protection Process

SOURCE: COLORADO DEPT. OF PUBLIC HEALTH AND ENVIRONMENT-WQCD

# Source Water Assessment Phase

As depicted in the upper portion of Figure 11, the Assessment Phase for all public water systems consists of four primary elements:

- 1. Delineating the source water assessment area for each drinking water source;
- 2. Conducting a contaminant source inventory to identify potential sources of contamination within each of the source water assessment areas;
- 3. Conducting a susceptibility analysis to determine the potential susceptibility of each public drinking water source to the different sources of contamination and;
- 4. Reporting the results of the source water assessment to the public water systems and the general public.

The Assessment Phase involves understanding where the Town of Paonia's source water comes from, what contaminant sources potentially threaten our water sources, and how susceptible each water source is to potential contamination. The susceptibility of an individual water source is analyzed by examining the properties of its physical setting and potential contaminant source threats. The resulting analysis calculations are used to report an estimate of how susceptible each water source is to potential contamination.

# **Source Water Protection Phase**

The Protection Phase is a voluntary, ongoing process in which the Town of Paonia has been encouraged to voluntarily employ preventive measures to protect their water supply from the potential sources of contamination to which it may be most susceptible. The Protection Phase can be used to take action to avoid unnecessary treatment or replacement costs associated with potential contamination of the untreated water supply. Source water protection begins when local decision-makers use the source water assessment results and other pertinent information as a starting point to develop a protection plan. As depicted in the lower portion of Figure 11, the source water protection phase for all public water systems consists of four primary elements:

- 1. Involving local stakeholders in the planning process;
- 2. Developing a comprehensive protection plan for all of their drinking water sources;
- 3. Implementing the protection plan on a continuous basis to reduce the risk of potential contamination of the drinking water sources; and
- 4. Monitoring the effectiveness of the protection plan and updating it accordingly as future assessment results indicate.

The water system and the community recognize that the Safe Drinking Water Act grants no statutory authority to the Colorado Department of Public Health and Environment or to any other state or federal agency to force the adoption or implementation of source water protection measures. This authority rests solely with local communities and local governments. The source water protection phase is an ongoing process as indicated in Figure 11. The evolution of the SWAP program is to incorporate any new assessment information provided by the public water supply systems and update the protection plan accordingly.

# SOURCE WATER ASSESSMENT RESULTS

The Colorado Department of Public Health and Environment assumed the lead role in conducting the source water assessments for public water systems in Colorado. The Town of Paonia drinking water providers received their source water assessment report in November 2004 and have reviewed the report along with the Source Water Protection Planning Team. These assessment results were used as a starting point to guide the development of appropriate management approaches to protect their source water from potential contamination. A copy of the source water assessment summary report can be obtained by contacting the water system or by downloading a copy from the Colorado Department of Public Health and Environment's SWAP program web site located at: *www.cdphe.state.co.us/wq/sw/swaphom .html.* The following sections provide a brief summary of the main findings from the three component phases of the assessment.

# **Source Water Assessment Area Delineation**

A source water protection area is the surface and subsurface areas from which contaminants are reasonably likely to reach a water source. The purpose of delineating a Source Water Protection Area is to determine the recharge area that supplies water to a public water source. Delineation is the process used to identify and map the area around a pumping well that supplies water to the well or spring, or to identify and map the drainage basin that supplies water to a surface water intake. The size and shape of the area depends on the characteristics of the aquifer and the well, or the watershed. The delineated source water assessment area provides the basis for understanding where the community's source water and potential contaminant threats originate, and where the community has chosen to implement its source water to potential contamination.

The Source Water Protection Planning Team reviewed the protection area delineated in the State's Assessment for the Town of Paonia and decided to expand the protection area beyond the zones of susceptibility to include a more definable boundary. This new boundary was created by tracing the closest section lines around the original delineation areas, thus making it easier to identify on a map, as shown on Figure 12.

<u>Ground Water Sources and Ground Water Sources under the Influence of Surface Water</u> The Town of Paonia's community source waters are from springs contained within the North Fork of the Gunnison River Watershed. The locations of potential contaminant sources to the drinking water intakes were evaluated using Geographic Information System technology to determine their proximity relative to three sensitivity zones defined as:

1) **Zone 1** is a 500-foot radius around each water source intake.

2) **Zone 2** is defined by estimating the distance it takes a particle of water to travel to the water source intake over a two-year time period by using a groundwater flow modeling program, known as a two-year time of travel.

3) **Zone 3** is defined as the rest of the source water assessment area not covered by either Zone 1 or Zone 2 and expands to include the section lines shown below.

### **Drinking Water Protection Area**

The Town of Paonia decided to expand the delineation of the Source Water Protection Area prepared by the CDPHE and adopt a community "Drinking Water Protection Area" (DWPA). The Drinking Water Protection Area takes into account section lines and is easier to identify on a map.

![](_page_19_Figure_2.jpeg)

Figure 11: Map of the re-delineated Source Water Protection Area

MAP: KIMBERLY MIHELICH, CRWA

# **Contaminant Source Inventory**

### <u>Notice</u>

The information contained in this "Plan" is limited to that available from public records and the water supplier. Other "potential contaminant sites" or threats to the water supply may exist in the source water assessment area that are not identified in this "Plan." Identification of a site as a "potential contaminant site" should not be interpreted as one that will necessarily cause contamination of the water supply.

In 2001-2002 a contaminant source inventory was conducted by the Colorado Department of Public Health and Environment to identify selected potential sources of contamination that might be present within the source water assessment areas. Discrete contaminant sources were inventoried using selected state and federal regulatory databases. Dispersed contaminant sources were inventoried using a recent land use/land cover and transportation maps of Colorado, along with selected state regulatory databases. The contaminant inventory was completed by mapping the potential contaminant sources with the aid of a Geographic Information System (GIS).

The results were provided to the water systems as part of the source water assessment process. As a town, we were asked to review the inventory information, field-verify selected information about existing and new discrete contaminant sources, and provide feedback on the accuracy of the inventory.

The WQCD's assessment process used the terms "discrete" and "dispersed" potential sources of contamination. A discrete source is a facility that can be mapped as a point, while a dispersed source covers a broader area such as a type of land use (crop land, forest, residential, etc.). Contaminant health concerns for the discrete and dispersed sources of contaminants are included in the Appendices of this report.

### **Discrete Potential Sources of Contamination**

As identified by CDHPHE, the contaminant source inventory results for the Town of Paonia indicates one type of discrete potential source of contamination:

• Aboveground, Underground and Leaking Storage Tank sites.

### **Dispersed Potential Sources of Contamination**

As identified by CDPHE, the contaminant source inventory indicates the following types of dispersed contaminant sources within the source water assessment areas analyzed:

- Pasture/Hay
- Row Crop
- Deciduous Forests
- Evergreen Forests
- Mixed Forests
- Road Miles

# **Susceptibility Analysis**

Notice: The susceptibility analysis provides a screening-level evaluation of the likelihood that a potential contamination problem <u>could</u> occur rather than an indication that a potential contamination problem <u>has or will</u> occur. The analysis is NOT a reflection of the current quality of the untreated source water, nor is it a reflection of the quality of the treated drinking water that is supplied to the public.

The susceptibility analysis was conducted by the Colorado Department of Public Health and Environment to identify how susceptible an untreated water source could be to contamination from potential sources of contamination inventoried within its source water assessment area. The analysis looked at the susceptibility posed by individual potential contaminant sources and the collective or total susceptibility posed by all of the potential contaminant sources in the source water assessment area. The Colorado Department of Public Health and Environment developed a susceptibility analysis model for surface water sources and ground water sources under the influence of surface water, and another model for ground water sources. Both models provided an objective analysis based on the best available information at the time of the analysis. The Colorado Department of Public Health and Environment provided the Town of Paonia with a final source water assessment report and supporting analysis information.

Table 7 summarizes the total susceptibility and physical setting vulnerability results, and the individual susceptibility results for the discrete and dispersed contaminant sources associated with each of the water sources identified in the assessment reports.

An explanation of the rating system used in Table 5 includes:

- 1) **Overall Susceptibility Rating** This rating is based on two components: the physical setting vulnerability of the water source and the contaminant threat.
- Physical Setting Vulnerability Rating This rating is based on the ability of the ground water flow to provide a sufficient buffering capacity to mitigate potential contaminant concentrations in the water source.
- 3) Land Uses (Dispersed Potential Sources of Contaminants) Susceptibility Ratings -This summarizes those land uses that the WQCD's assessment considered to represent the highest threats to the water source.

Public Water System	Town of Paonia	Town of Paonia
Public Water System Identification #	CO0115601	CO0115601
Drinking Water Sources	Springs	Springs
Source Type	Ground Water	Ground Water under the Influence of Surface Water
OVERALL SUSCEPTIBILITY R	ATING	
	4-Moderately Low	2-Moderately Low 34-Moderate
PHYSICAL SETTING VULNER	ABILITY RATING	
	4-Moderately Low	35-Moderate 1-High
DISCRETE CONTAMINANT SC		
Aboveground, Underground and Leaking Storage Tank Sites	Х	х
DISPERSED CONTAMINANT S		
Pasture/Hay	Х	Х
Road Miles	Х	Х
Forests: Deciduous, Mixed, & Evergreen	Х	X
Row Crops	X	Х

Table 5: Susceptibility Results and Contaminant Source Inventory as identified by CDPHE

# **Contaminants Health Concerns**

The discrete and dispersed sources of contaminants can cause acute and chronic health concerns as indicated below. These categories of contaminants are most likely associated with the most prevalent sources identified in Table 5.

#### Acute Health Concerns

Acute health concern contaminants include individual contaminants and categories of constituents that pose the most serious immediate health concerns resulting from short-term exposure to the constituent. Many of these acute health concern contaminants are classified as potential cancer-causing (i.e., carcinogenic) constituents or have a Maximum Contaminant Level Goal (MCLG) set at zero (0).

#### Table 6: Acute Health Concerns

Acute Health Concern	Discrete	Dispersed
Microorganisms	Х	Х
Nitrate/Nitrite	Х	Х
Pesticides	X	Х
Semi-volatile organic compounds	X	
Volatile organic compounds (VOCs)	Х	
Lead	X	
Ammonia or nitric acid	X	Х

SOURCE: COLORADO WATER QUALITY CONTROL DIVISION

#### Chronic Health Concerns

Chronic health concern contaminants include categories of constituents that pose potentially serious health concerns due to long-term exposure to the constituent. Most of these chronic health concern contaminants include the remaining primary drinking water contaminants.

#### Table 7: Chronic Health Concerns

Acute Health Concern	Discrete	Dispersed
Herbicides	Х	Х
Pesticides		Х
Volatile organic compounds (VOCs)	Х	
Non-metal inorganic compounds		
Metals – Primary Drinking Water (other than lead)	Х	
Turbidity	Х	Х
Other inorganic compounds	Х	Х
Other organic compounds	Х	

SOURCE: COLORADO WATER QUALITY CONTROL DIVISION

# **DISCUSSION OF ISSUES OF CONCERN**

The Planning Team reviewed the information presented in the State's assessment, discussed other potential sources of contaminants not included in the assessment, and identified areas of concern within the source water protection areas in which to focus our management approaches.

Issues of concern include:

- Public Lands
- Land use: Growth and Development

All other potential issues of concern that were identified by the State's source water assessment for the Town of Paonia were determined to be of very low or no risk to our source water protection area.

### **Surface and Ground Water Contaminants**

Many types of land uses have the potential to contaminate source waters: spills from tanks, trucks, and railcars; leaks from buried containers; failed septic systems, buried or injection of wastes underground, use of fertilizers, pesticides, and herbicides, road salting, and polluted urban and agricultural runoff. While catastrophic contaminant spills or releases can wipe out a water resource, ground water degradation can result from a plethora of small releases of harmful substances. According to the USEPA, nonpoint-source pollution (when water runoff moves over or into the ground picking up pollutants and carrying them into surface and ground water) is the leading cause of water quality degradation (GWPC, 2008).

![](_page_24_Picture_8.jpeg)

Figure 12: Schematic drawing of some potential sources of contaminants to surface and ground water

SOURCE: GROUND WATER ATLAS OF COLORADO

### **Public Lands**

The majority of the source waters for the Paonia, Colorado originate on Gunnison National Forest land managed by the Paonia Ranger District. These source waters have the greatest potential to be directly affected by land use or forest management activities.

The public land managers adhere to the principal of multiple-use management outlined by the Federal Land Policy and Management Act. This means that they balance outdoor recreation and preservation of wildlife habitat, air and water, and other scenic and historical values with environmentally responsible commercial development of the land and its resources.

Studies show that the percentage of forested land in a source water area is one of the most important factors in determining water quality. The more forested land in a source area, the better the water quality and lower the treatment costs (Source Protection Handbook: Using Land Conservation to Protect Drinking Water Supplies, 2005).

The Planning Team will monitor the water quality from the effects of forest fires, off-road vehicles, and livestock and wildlife grazing, within forest lands.

#### Forest Fires

The Paonia Ranger District has participated on the Planning Team and has identified management approaches for these forest lands to protect water quality. The Planning Team recommends keeping informed on forest management issues, participating in the forest planning activities, and developing partnerships with forest land managers.

#### **Recreation**

Much of the source water protection area is within forest lands. The Planning Team has identified off-road vehicle use as a potential threat to forested lands within the source water protection area. Some undesirable impacts include severely eroded soils, user-created unplanned roads, disrupted wetland ecosystems, as well as general habitat destruction and degraded water quality throughout forested lands.

Most off-road vehicle use within the Gunnison National Forest is only allowed on established or designated routes. As shown in Figure 14, parts of Paonia's source water protection area allow off-road vehicles during summer months while other parts prohibit the use yearlong.

#### Grazing

Since 1988 all livestock have been managed as a pool and have grazed both the BLM and the National Forest lands. The allotment has been broken into 29 pastures. The basic grazing program involves moving onto the allotment on the low elevation pastures, then moving into higher elevation pastures as plant development allows. Cattle are moved through the pastures on an annually alternating clock-wise/counter clock-wise fashion. Livestock graze a pasture once a year, for 3 to 20 days depending on each pastures capacity.

Within the Gunnison National Forest, grazing can impact upland infiltration and erosion, and water quality for groundwater under the influence of surface water infiltration. The most common livestock-caused impacts include fecal/bacterial contamination, sedimentation, and increased

### DISCUSSION OF ISSUES OF CONCERN

temperatures. Livestock and wildlife grazing activities with the highest potential for direct and indirect impacts to water resources include long-term concentrated grazing in infiltration areas, and trampling/trailing near water sources.

The Planning Team recommends obtaining a map of the grazing allotments and schedule of use within the watershed, monitoring riparian and water quality health impacts on forest lands within the watershed, and encouraging BMPs to minimize source water impacts.

Figure 13: Public land use map

![](_page_26_Figure_4.jpeg)

# Land Use: Growth and Development

Currently, land within our source water protection area is primarily public land and a portion is owned by the Town of Paonia. Future development of this area is currently not a potential threat. However, the Team recommends that decision makers within Delta County be encouraged to consider source water protection when making land use decisions.

# SOURCE WATER PROTECTION MEASURES

# **Management Approaches**

The Planning Team reviewed and discussed several possible management approaches that could be implemented within the Source Water Protection Area to help reduce the potential risks of contamination to the community's source water. The Planning Team established a "common sense" approach in identifying and selecting the most feasible source water management activities to implement locally. The focus was on selecting those protection measures that are most likely to work for this project.

The Planning Team recommends the management practices listed in Table 13, "Source Water Protection Best Management Practices" be considered for implementation by:

- Town of Paonia
- Bureau of Land Management
- U.S. Forest Service Paonia Ranger District
- Delta County (Government, Land Use, and Health Department)
- Colorado Department of Public Health and Environment
- Colorado Rural Water Association

# **Evaluating Effectiveness of Management Approaches**

A plan is only a prologue. Its usefulness lies in its implementation. What is essential therefore, is the willingness of the community to concern itself with its own future. Building on that concern, this Plan can be a catalyst for responsible and productive measures to guide the changes that inevitably will come (Delta County Master Plan, 1996).

The Town of Paonia is voluntarily committed to applying source water assessment and protection principles to finding and protecting new water sources in the future. This is part of the larger ongoing commitment to providing the highest quality drinking water to their consumers.

As a town, we are voluntarily committed to assisting the Colorado Department of Public Health and Environment in making future refinements to their source water assessment and to revise the Source Water Protection Plan accordingly based on any major refinements.

# Source Water Protection Best Management Practices

 Table 8: Source Water Protection Priorities and Best Management Practices

Priority Issue	Management Approach	Implementer
Public Lands		
Forest Fires	<ol> <li>Fuels Reduction – The District Ranger will continue to implement the National Fire Plan as well as the Lamborn Wildlife Habitat Improvement Project to reduce fuels within the National Forest lands within the watershed.</li> <li>Fire Prevention – The District Ranger will continue to implement their fire prevention plan which includes public education programs: Fire Wise program and Project Learning Tree.</li> </ol>	Paonia Ranger District Paonia Ranger District
Livestock Grazing	1. Obtain a map of the livestock grazing allotment in the	Steering Committee
	watershed and environmental assessment reports that pertain to livestock grazing.	Paonia Ranger District
	2. Continue the management of the allotments within the planning area	Paonia Ranger District
	3. Identify monitoring that evaluates livestock impacts on riparian areas and water quality. Encourage the use of BMPs to minimize source water impacts.	Paonia Ranger District
Roads and Sediment	1. The USFS will continue to use road maintenance BMPs and	Paonia Ranger District
	management decisions to prevent sediment delivery to streams. These may include grading, culverts, sediment basins, water bars, stream bank revegetation, as well as seasonal and permanent road closures	Town of Paonia
Recreational Activities	1. Minimize the effects of recreational activities within the watershed from both motorized and non-motorized activities. Continue to provide multiple uses while restricting motorized vehicles to system authorized roads that are signed. Restore or close areas degraded by OHV usage	Paonia Ranger District
Public Outreach and	1. Keep informed of forest management issues in the watershed,	Steering Committee
Participation	participate in forest planning activities, and work as partners with forest land managers	Town of Paonia

Priority Issue	Management Approach	Implementer
Water Utility		
Water Supply Intakes	1. Perform regular inspection of the springs.	System Operators
	2. Protect areas around intakes with fencing and signage.	System Managers
Water Operations	1. Ensure that the water treatment plant is properly manage, operated and maintained to prevent contamination of the drinking water.	System Managers
	<ol> <li>Store chemicals properly at the treatment plant.</li> <li>Ensure that all employees are familiar with the Source</li> </ol>	System Managers
	Water Protection Plan, emergency and contingency plan, and hazardous spill response.	System Managers
Public Education	1. Develop a mailing list of land owners and residents within the protection area.	Steering Committee
	2. Provide information concerning the SWPP in the annual Consumer Confidence Report (CCR). Insert an additional letter of paragraph in the CCR of their presence within the protection area and information on how they can help prevent pollutants from entering the source waters.	Town of Paonia
Water Quality Monitoring	1. Conduct water quality monitoring of spring intakes as required by the Colorado Department of Public Health and Environment	System Managers

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# APPENDIX B: FUNDING SOURCES FOR SOURCE WATER PROTECTION

# List of Water Related Grant and Loan Programs in Colorado

(Compiled by Colorado Office of Interbasin Compact Negotiations, August, 2006)

### Colorado Water Conservation Board

- Severance Tax Trust Fund Operational Account
- Flood Hazard Planning and Project Grants
- Colorado Watershed Protection Fund
- Water Efficiency Grant Program
- Water Project Construction Loan Fund
- Feasibility Study Small Grant Fund
- Flood Response Fund

#### Colorado Water Resources and Power Development Authority

- Drinking Water Revolving Fund
- Small Water Resources Projects
- Water Pollution Control Revolving Fund
- Water Revenue Bonds

#### **Reclamation**

• Water 2025 Challenge Grant Program

### <u>EPA</u>

- Watershed Processes and Water Resources Program
- Water Resources Research National Competitive Grants Program
- Clean Water State Revolving Fund
- Water Quality Cooperative Agreement Allocation
- Watershed Protection and Flood Prevention Program

#### **Conservation Districts**

CRWCD Large Grant Program

#### **Rural Community Assistance Corporation**

• Loan Program for Environmental Infrastructure and Water Facilities

#### Colorado State Parks

• Land and Water Conservation Fund

#### US Department of Housing and Urban Development

• State Administered Community Development Block Grants

### USDA Farm Service Agency

Farm Loans

# APPENDIX C: DELTA COUNTY MASTER PLAN

![](_page_34_Picture_1.jpeg)

Over the past two years, the citizens of Delta County have been involved in a grassroots planning process to revise the 1990 Delta County Master Plan. The primary purpose of this effort was to address the impacts of growth on the rural lifestyle and natural resource base of Delta County. The approach considered resource conservation and management as the basis for planning in Delta County rather than traditional urban planning models.

The process divided the County into seven planning areas based on watersheds and communities within each watershed. Citizens within each planning area volunteered to serve on a resource team. Each team defined its community vision, identified its natural and human resources and recommended strategies to achieve the vision for its desired social and physical landscape. Public meetings were held throughout the process in each planning area to get input from area residents.

The revised Delta County Master Plan is the result of this grassroots effort and addresses the five concerns shared by all seven planning areas. The Plan may not incorporate all of the desires and recommendations of each planning area, but it does represent the common ground among them.

The revised Delta County Master Plan will serve as an advisory document to guide both public and private entities in making sound decisions, based on a shared community vision for the future growth and development of Delta County.

#### PUBLIC HEARING SCHEDULE

The Delta County Planning Commission, Future Growth Steering Committee and Planning Area Committees will host public hearings on the draft of the Revised Delta County Master Plan on the following dates.

Area	Date	Time	Location
Escalante Planning Area	Tues., Nov. 12, 1996	7:00 p.m.	Delta High School Commons
Peach Valley Planning Area	Tues., Nov. 12, 1996	7:00 p.m.	Delta High School Commons
Uncompangre Planning Area	Tues., Nov. 12, 1996	7:00 p.m.	Delta High School Commons
Crawford Country Planning Area	Wed., Nov. 13, 1996	7:00 p.m.	Crawford Town Hall
Surface Creek Planning Area	Tues., Nov. 19, 1996	7:00 p.m.	Cedaredge Com. Center
Leroux Creek Planning Area	Wed., Nov. 20, 1996	7:00 p.m.	Memorial Hall, Hotchkiss
Upper North Fork Planning Area	Thurs., Nov. 21, 1996	7:00 p.m.	Paonia Town Hall

#### INTRODUCTION

The Delta County Master Plan is a blueprint for the County's future. It is a tool for providing coordinated guidance and direction for meeting such challenges as population and economic growth, provision for public services and natural resource protection. The Master Plan provides a look at the natural resources and infrastructure of Delta County; at the issues, needs and opportunities the County and its citizens are facing; and recommended activities the County can undertake to implement citizens' visions for the future of this area.

In 1990, Delta County adopted a Master Plan to guide future growth and development in the unincorporated area of Delta County. At that time, the County's population was less than in 1980. The County's economy is just beginning to recover from the mining bust and agricultural decline of the mid-80's. The 1990 Master Plan set forth broad based goals and objectives addressing the future growth and development but it did not suggest or recommend implementation strategies to realize the goals or objectives of the Plan. Since 1990, Delta County has experienced considerable growth. In 1994, a citizens' ad hoc committee conducted two series of meetings throughout the County to discuss the impacts of growth on the rural landscape and quality of life. At the conclusion of the meetings, the ad hoc committee submitted recommendations to the Board of County Commissioners. One recommendation was to review and revise the 1990 Master Plan to address the County's current issues and to provide a framework for planning the future of Delta County.

Any plan is only a prologue. Its usefulness lies in its implementation. What is essential therefore, is the willingness of the community to concern itself with its own future. Building on that concern, the Master Plan can be a catalyst for responsible and productive measures to guide the changes that inevitably will come.

Finally, a master plan is an advisory document only and has no regulatory or restrictive powers. It is not written in stone but is meant to be evaluated by the community at large at least every five years to reflect changing circumstances within the community.

#### PART ONE

#### COMMUNITY PROFILE AND PLANNING PROCESS

Part I contains a general profile of Delta County as it exists today and a description of the planning process that was utilized to revise the 1990 Delta County Master Plan. The community profile provides a very broad snapshot of the current conditions and resources within the County and describes some of the current growth trends. The planning process outlines the two year citizen-based process that addressed three questions: (1) what does the County look like today? (2) what does the County want to look like in the future? and (3) how will the County accomplish its vision for the future?

#### COMMUNITY PROFILE

#### Geographic Resources

Delta County is located in the west central part of Colorado and has a land area of 1,157 square miles. The County has unique and diverse land forms and a varied topography: flattop mesa and "adobe" badlands, river canyons, flat irrigated farm lands, and high mountain peaks. Elevations range from 4,750 feet in the Gunnison River Valley to well over 11,000 feet in the West Elk Mountains. Escalante and Dominguez Canyons are outstanding landscape features to the west, and Grand Mesa dominates the northern landscape at an elevation of 10,000 feet.

The North Fork of the Gunnison River enters the County from the east, the Gunnison River and the Uncompany River flow from the south. These rivers and their tributaries provided a force that helped shape and enrich the character of the unique land forms cut from the geologic landscape of Delta County.

#### Economic Resources

Traditionally, Delta County's economy has been based on agriculture and mining. Earnings: from mining employment within Delta County have declined by more than 50% within the past decade as a result of mine closures and the implementation of technological efficiencies within the industry. Agriculture has cushioned the busts of the mining industry and agriculture remains the mainstay of the County's economy. But it is challenged by declining cattle market prices and pressures from population growth.

Delta County now is facing a transition from Its traditional resource-based industries of agriculture, mining and timbering to the "New West" economy of tourism and recreation Wedged between the resort areas of Aspen, Crested Butte, and Telluride, the County is experiencing an in-migration of urbanites and more tourists This is bringing economic opportunities, but at a price: it will inevitably change the County's social fabric and rural landscape.

#### Population Resources

The County experienced its first significant population growth in the 1970s. This was followed by a decline in the latter half of the 1980s caused by mine shutdowns in the North Fork Valley. Now the County is growing again: Since 1990 its population has shot up by nearly 20 percent, to 25,023 from 20,980. The new residents are retirees, "lone eagle" telecommuters, service employees who cannot afford to live where they work, and "baby boomers" seeking a better quality of life.

The County's Hispanic community also is growing About 6,000 Hispanic farm workers now reside in the Delta and Montrose areas. Farm workers used to come for the harvest season and then return to Mexico Now they stay because of the growth of the winter job market in the region's ski resorts.

#### Natural Resources

Delta County has a variety of natural resources which have been the basis for its economy over time. 55 percent of the County's 740,000 acres of land is federally owned and managed by the Grand Mesa, Uncompandere and Gunnison National Forest and the Uncompany re Resource Area of the Bureau of Land Management. Early settlers in Delta County developed and improved the land in order to irrigate fields for produce, fruit orchards and cattle ranching: Over the years other farm products (sugar beets, barley, broccoli, and poultry) have been introduced. Today, of the 330,900 privately owned acres, most remain in some form of agricultural production - either fruit orchards, row crops or pasture. This has led to an agricultural diversity within the County and has allowed the County to be a major producer of agricultural products within the State.

Two other natural resources have played an important role in the history of Delta County: forests and coal. National forestry began in 1893 with the establishment of the Battlement Mesa Forest Reserve. This area was later divided to establish the Grand Mesa National Forest and the Gunnison National Forest. Today, controlled grazing, lumber production and a multitude of recreational opportunities abound on the national forests within Delta County. Coal mining has been cyclical in nature, but current mine production in the North Fork Valley is at its highest production level, although mining employment has declined due to technological efficiencies within the industry.

Wildlife is another natural resource that adds value to the rural character of Delta County and contributes significantly to the local economy particularly during hunting seasons: The Division of Wildlife has estimated that the total economic value of wildlife exceeds \$18 million annually for Delta County.

#### Cultural Resources

Delta County has a history rich In Indian lore, mining, railroads and, agriculture. Preservation of the cultural heritage of this area has been identified as an important value and is ensured by a variety of initiatives: Delta County has two state designated Scenic and Historic Byways. Both Scenic Byways are developing corridor management plans to provide for the protection and interpretation of the cultural heritage and natural resources of the areas.

Local communities are trying to capture tourists by marketing the history and cultural heritage of the area. Pioneer Town in Cedaredge is a collection of historical buildings that provides a replica of early living in the Surface Creek Valley. Fort Uncompany in Delta is a living history museum that captures the early fur trading days at the confluence of the Gunnison and Uncompany rivers: All communities host annual summer festivals that highlight the heritage unique to their community.

#### Government Resources

Delta County is comprised of six Incorporated municipalities, each with its own governing body. The County's current philosophy of governance relies heavily upon citizen participation and advisory groups. The County Commissioners convene quarterly meetings with the elected officials of each community to discuss common issues and seek cooperative solutions. In addition, the County has actively initiated and supported regional coalitions to address issues of regional concern and impact, e.g. air quality, public lands policy and management, housing, transportation and growth issues.

#### Community Infrastructure and Services

Each of the incorporated municipalities is responsible for providing basic infrastructure and services to their residents. Most residents in the unincorporated areas of the County are served by small domestic water companies and individual sewage disposal systems. With the exception of the City of Delta, communities are experiencing pressure on their existing water and sewer systems and have either imposed moratoriums on water taps or are making substantial improvements to their water and wastewater systems to accommodate the new growth.

Electrical services are provided by both Delta Montrose Electric Association and the City of Delta. Telephone service is provided by Delta County TeleComm in part of the County and US West in the greater Delta area Both electrical and telephone providers say they have the capacity for a moderate rate of growth. Health care services are provided by area physicians, medical clinics, three independent ambulance services, area nursing homes and the Delta Memorial Hospital. Educational, needs are addressed by the public school system and the Delta/Montrose Area Vocational Technical Center. The Delta County Library system has libraries in the communities of Cedaredge, Crawford, Delta, Hotchkiss and Paonia.

The residential growth pattern has increased demand for public safety, fire protection, rural health care, social services, transportation, housing and road systems. A variety of local and regional efforts are underway to address many of the impacts on the various community systems that are not the direct responsibility of local governments or special districts.

#### PLANNING PROCESS

#### Background

Delta County currently has no zoning or land use plan in place that guides land use decisions on a countywide basis. There are three existing special planning districts within the. County that have adopted zoning regulations for properties within their boundaries. In addition, the County does have regulations that govern the subdivision of land, development in floodplains, mobile home parks and utility and access permits.

In 1993, a diverse group of citizens approached the County Commissioners to sponsor a series of community meetings on the impacts of growth and how citizens would like to address the issues. The Commissioners supported this citizen effort because they believed that any new planning initiative should come from the people of Delta County. The Ad Hoc Growth Committee conducted two series of meetings in each of six geographic areas of the County during late 1993 and 1994. In the summer of 1994 the Committee presented its recommendations to the County Commissioners.

In response to the Committee recommendations, the Commissioners appointed a Growth Steering Committee to work with the County Planning Commission and the County Commissioners to rewrite the County's Master Plan. The Crowth Steering Committee is comprised of about 25 members who represent not only different interests but different geographic areas of the County and each municipality. Its primarily function is to help with the public process and to act as a sounding board for the staff, and Planning Commission as the Master Plan is rewritten.

The County was then divided into seven planning areas based on watersheds and social communities within each planning area. The seven areas are Escalante (north Delta area), Uncompanyre (river valley floors and mesas lying to the east, west and south of the City of Delta from 1800 Road to Delta/Montrose County line), Peach Valley, Surface Creek Valley, Leroux Creek (Hotchkiss and Redlands mesa area), North Fork (Paonia area), Crawford Country (see Appendix A for a map of the planning areas).

At public meetings held throughout the County in the spring of 1995, each planning area was presented with 14 issues related to growth and development that had been identified within the region since 1992. The areas were asked to prioritize the issues they felt were most important. The results of those public meetings identified the following as the most important county-wide issues:

- 1) Preservation of agricultural lands and open space
- 2) Protection of private property rights
- 3) Maintaining the rural lifestyle
- 4) Scarcity of availability of domestic water
- 5) Lack of land use planning

Following the public meetings, each planning area identified a work team to work with County staff and technical resource persons, e.g. DOW, water companies, Soil Conservation, irrigation companies, to begin to define their vision for the future social and natural landscape of their area. Over 350 people attended the various public planning area meetings and some 75 citizen volunteers have worked with the Future Growth Steering Committee and Planning Commission.

During the spring and summer of 1995 the planning area resource teams defined their future visions, identified natural and manmade community resources, and developed strategies to recommend to the County Commissioners to achieve their goals. In November 1995 the planning areas met with the Future Growth Steering Committee and Planning Commission to report on the progress in each planning area and to identify any common concerns. The planning areas listed five:

- Preservation of agriculture
- Maintaining the rural lifestyle
- Require new development to pay its own way and be directed to areas with adequate infrastructure
- Protection of private property rights
- Economic development

During the winter and spring of 1996 representatives of each planning area and the Planning Commission have met in monthly work sessions to develop goals, objectives and implementation strategies that provide a framework for addressing those common concerns. The five common concerns noted above represent the basis for the rewriting of the 1990 Delta County Master Plan. The Plan may not incorporate all of the desires and recommendations of each planning area, but it does provide a starling point and it represents a minimum level of standards to be considered for the County.

Individual planning areas may wish to develop more comprehensive plans for their area that address the concerns specific to their area. The County Commissioners have agreed to consider the level of planning each community wants when reviewing development proposals within the respective planning areas. When and if each planning area elects to develop a separate plan to achieve its vision for the future, the plan will be incorporated as an appendix to this County Master Plan. The revised Delta County. Master Plan and individual planning area plans, as developed and adopted by the residents of each planning area, will serve as the basis for future land use decisions.

#### DELTA COUNTY MASTER PLAN

#### PART TWO

#### GOALS, POLICIES AND IMPLEMENTATION STRATEGIES

PART II contains the goals to realize Delta County's vision for the future and represent the common concerns that were identified by the seven planning areas. These goals reflect the values that are important to the citizens of Delta County. They establish the direction to be followed in the future to protect and enhance our quality of life.

The specific policies provide a framework for achieving the goals. The implementation strategies are recommended actions that can be taken by the County's citizens, community and business leaders, and elected officials. They are not regulations or a final commitment but could lead to the adoption of the necessary regulatory tools after the Master Plan is approved.

#### MASTER PLAN GOALS:

I. Preservation of Agricultural Land and Agricultural Operations

#### Introduction

Delta County is an agricultural County where the. importance of the agricultural economy is real and not merely a symbol of a westem life style. In 1995 the market value of agricultural products grown in Delta County was \$44,593,000. The total economic impact of agriculture and related industries was an estimated \$134,760,840. Agriculture, including forestry, and agricultural related business directly employ an estimated 23 percent of the total County workforce. Agriculture accounts for approximately 40 percent of the total workforce, when indirect employment is included.

Agriculture is critical to the economy of Delta County. The seven planning area committees all recognized that any threats to the agricultural base resulting from development could be a major detriment to the overall economic well being of the County. They also recognized that agriculture, more than any other factor, defines the rural character of the County. The planning area committees want a viable agricultural economy. In addressing this concern, these issues emerged.

#### ssues

 Equity. The preservation of agricultural land through land use regulation puts the economic burden of preservation on the farmer or rancher. An agricultural preservation program must also provide voluntary incentives and flexible land use approaches that recognize and fairly compensate landowners for keeping land in agriculture. **Definition**. Not all open space is agricultural land, nor Is all agricultural land prime agricultural land as defined by the Natural Resource Conservation Service. An agricultural preservation program must focus on agricultural land and identify the land that can support a viable agricultural operation.

- Interrelationships. The economic viability of agriculture is dependent, in part, upon the continued multipal use philosophy of the public lands that have historically provided summer grazing lands for Delta County's cattle and sheep ranchers. This interdependency between agriculture and public lands has been a cultural tradition and custom within Delta County. Any weakening of the current multiple use philosophy will threaten the viability of this agricultural community. The County also should promote businesses and industries that support agricultural land use. This would include activities that add value to existing raw products as well as the promotion of new marketing mechanisms.
- Incompatibility. If maintaining a critical mass of agricultural land use is the County's highest priority, the County must be willing to restrict other uses that are incompatible with agriculture and related business. This means residential subdivisions and other types of development adjacent to agricultural operations may have to be denied or required to mitigate adverse impacts on existing agricultural land use.

The concern over the future of agriculture in Delta County and the issues that are associated with that concern resulted in a goal statement that went beyond the land preservation issue.

#### Goal Statement

Maintain Delta County as an agricultural community by preserving agricultural land, enhancing the viability of agricultural operations and encouraging a social, economic and political environment that reflects a positive attitude toward agriculture.

#### **Policies**

A. An agricultural preservation program must identify the lands that are important to agriculture and focus on the preservation of land that is critical to the agricultural economy of Delta County.

#### Implementation Strategy

Establish the criteria for identification of important agricultural land and, perform the analysis necessary to identify and map the important agricultural lands and agricultural uses within each planning area. B. An agricultural preservation program should be equitable by providing a variety of options and incentives to landowners who keep lands in agriculture.

#### Implementation Strategies

- Fully explore the potential for a successful Transferable Development Rights (TDR) program for the County that includes the possible sources of funding for both pilot programs and a TDR Bank.
- Establish a strong liaison with the private and public agencies that advocate agricultural land preservation in order to fully utilize conservation easements and other tools to preserve agricultural land.
- Provide flexibility in the subdivision review process for those landowners who are willing to cluster development to preserve agricultural lands.
- C. An agricultural preservation program must include efforts to preserve and enhance the overall agricultural economy through programs that promote the County's agricultural products and provide support to those related industries and businesses' critical to agriculture.

#### Implementation Strategies

- I. Provide financial support for promotional and marketing programs.
- Identify the economic contribution of those industries and businesses that are agriculturally related and publicize their contributions.
- Conduct research and develop programs that will add value to existing agricultural products.
- Encourage local economic development organizations to support and recruit valueadded processing and food and fiber manufacturing opportunities.
- D. An agricultural preservation program must Include provisions that protect viable agricultural operations from development that would have adverse impacts on the operation.

#### Implementation Strategies

 The County Commissioners should recognize that preserving agricultural land and sustaining the agricultural economy have primary status in the adoption or revision of County regulations.

- 2. The County staff should work with agricultural organizations and representatives of agricultural related businesses to identify those types of land uses that have or may have a direct and negative impact on agriculture, agricultural infrastructure and agricultural industries. Methods of mitigating the adverse impacts of new development on agriculture should be developed as part of the regulation and review of new development.
- The County should utilize its authority under state laws to develop a local planning area review process for any change in land use from agricultural use to residential, commercial or industrial use, and to develop mitigation standards to minimize the potential negative impacts on agricultural lands.
- The County should consider including preservation of agriculture in the "Purpose" or "Intent" sections of existing regulations.
- The County should direct growth and infrastructure development to protect productive agricultural lands.
- The County should strengthen its Right-to-Farm policy by adopting a Right-to-Farm ordinance.
- The County should educate people moving in next to ranches and farms about agricultural practices.
- E. An agricultural preservation program should discourage the conversion of irrigation water for agricultural use to domestic or municipal use.

#### Implementation Strategy

Explore alternative mechanisms and methods to ensure that development of water for municipal, or domestic uses does not adversely affect irrigation water resources.

II. Preservation of the Rural Lifestyle and Landscape. The Natural Environment and Unique Physical Characteristics of Delta County.

#### Introduction

Delta County is a rural community as defined by both objective and subjective measurements. 23 percent of the County workforce is employed in agriculture. 54 percent of the County residents live in the unincorporated area which has a population density of 26 persons per square mile. All of these are objective criteria for defining a rural community.

But a rural lifestyle is not measured solely by objective criteria. There is a sense of community, e.g. how people view the community in which they live, their relationships with their neighbors, their philosophy of how community interrelationships work and the pace of their daily activities. The residents of Delta County perceive themselves as living in a community that values hard work, self-reliance, honesty, involvement in civic activities and a caring attitude about their neighbors.

A rural lifestyle also includes the natural resources that are associated with a rural landscape. The planning areas identified wildlife habitat and migration corridors, open space, agricultural lands, clean air, scenic viewsheds. wetlands and riparian areas. In addition, Delta County has unique and diverse land forms and a topography that varies from high mountain peaks to semi-arid adobe badlands. The two major rivers, the Gunnison and the Uncompahgre, add to this unique landscape through the constant reshaping of the land.

#### Issues

The area planning committees were virtually unanimous in their desire to preserve and maintain the County's rural character. The major issues are:

- <u>Density</u>. A rural community is defined, in part, by its population density. The current population density in the unincorporated areas of Delta County is 26 persons per square mile. However, given the different resources and values within each of the planning areas, opinions differ as to what the density level should be. What density level can be supported by the County road system and services? What is the carrying capacity of the local landscape and natural resource base?
- <u>Natural Resources</u>. Development can change the rural landscape and natural resources if measures are not taken to protect these resources. Does the County have the tools and resources available to preserve the environmental character of the County and still accommodate a reasonable rate of growth and respect individual property rights?
- <u>Rural Sprawl</u>. Few things change the rural character or affect its natural resources more than the conversion of the natural areas to development. Although most residents take such resources for granted in their daily lives, they are strongly affected when such lands and resources begin to sprout buildings and parking lots. Rural sprawl impacts agricultural viability, reduces open space and increases wildlife pressure on remaining agricultural lands. It is difficult and expensive for local governments to provide services for rural sprawl.

#### Goal Statement

Preserve the rural character and natural environment, and protect the unique physical resources of Delta County through programs that provide an equitable balance of preservation and respect for individual property rights

#### Policies:

A. Establish a range of densities appropriate for each planning area within the County.

#### Implementation Strategies

- Undertake the research and analysis necessary to objectively define a rural population and recommend that each planning area establish density levels appropriate for its community vision and the carrying capacity of its natural and manmade resources.
- Prepare an objective public information program on the advantages and disadvantages of a density limitation for Delta County. Use reasonable growth rates or target year population limits (year 2020?) as a basis for the density calculations. Present alternatives including, (a) no new regulations, (b) voluntary growth management strategies and (c) additional and more restrictive land use regulations such as zoning.
- Undertake infrastructure (capital improvements) planning and service delivery programs for the designated rural areas that are tailored to meet only rural needs.
- B. Inventory and classify the physical features and environmental resources of the County..

#### Implementation Strategies

 Collect and analyze the data necessary to map the significant physical features and environmental characteristics of the County. The data base should include, at a minimum; areas of steep or unstable slopes, soils, floodplains, wetlands and riparian areas, critical watersheds, wildlife migration paths and (critical) winter habitat, important scenic viewsheds and areas with a high potential for wildfires.

- Develop criteria for assessing the impact of new development on the significant physical features and critical environmental resources. Utilize mapped data and impact assessments to designate areas as "more" and "less" suitable for development.
- C. Identify the developmental pressures that could threaten the preservation of the Important physical features and environmental resources of the County.

#### Implementation Strategies

- The County staff should work with agencies and/or groups associated with the different resources to identify those types of land uses that may have direct and negative impact on the significant physical features or resources.
- Develop mitigation standards or development restrictions to minimize the adverse impact of development on each specific resource.
- D. Develop programs and resources that provide compensation and/or incentives to landowners who preserve resources and restrict development.

#### Implementation Stgrategies

- Prepare a resource manual that includes the full range of incentives and compensation available to landowners who withhold land from development. This would include programs from other agencies such as: the Colorado Division of Wildlife, federal and state agricultural programs, land trusts, the Nature Conservancy and private foundations.
- Develop a Resource Preservation Program to provide landowners who elect to preserve specific natural resources an expedited development review process.
- 3. Develop a Landowner Outreach Program that is designed to educate landowners about all the development options before they proceed to develop their land.
- E. Utilize existing regulations to preserve and protect the significant physical features and environmental resources of Delta County,

#### Implementation Strategies

 Inventory and review existing regulations, i.e., subdivision, floodplain, Area of State Interest (1041 powers), to determine their effectiveness in preventing or mitigating the adverse impacts of new development.

- Develop a local planning area review process for any change of land use or new development and develop mitigation standards to minimize the potential negative impacts on resources identified as important to maintaining a rural character, e.g. wildlife, agricultural lands, riparlan areas and open space.
- III. Encourage New Development to Locate In Areas with Adequate Infrastructure and Require that Development Pay Its Own Way

#### Introduction

This position is derived from concerns that were reflected in the planning area committees' meetings and draft plans. The intent is to deal with the pace and impact of growth as it relates to public infrastructure and services, and, to identify the real costs of growth in order to require that those who cause or benefit from growth also pay the costs.

The concern over the impacts of growth and the financial responsibility for those impacts is supported by the costs of corresponding improvements to the infrastructure and the increased demand for County services. According to current information released by the Consus Bureau, the County's 1995 population has increased by 19.6 percent since 1990 or an average annual growth rate of 4 percent. The State Demographer's office has projected that Delta County's average annual growth rate will be at 2.5 percent through the year 2010. For the past several years, however, Delta County has exceeded the State Demographer's estimates. The planning area committees have expressed major concerns over the impacts of an annual growth rate that exceeds 2 percent.

#### Issues:

- <u>County Infrastructure and Services</u>. The increasing population and residential development is outstripping the County's ability to improve and maintain the County road system. A road system designed to accommodate traditional farm-tomarket demands is now expected to accommodate commuter traffic. The Sheriff's Department, staffed to deal with the level and complexity of rural crime, is now expected to respond to calls that are more urban in character. Emergency services are finding it more and more difficult to access and properly fight fires that are occurring in areas attractive for new development but isolated from adequate infrastructure.
- <u>Domestic Water</u>. The unincorporated areas of the County are mostly served by small water providers that are designed to serve a rural, farm or ranch community. They have limited available water resources and lack financial capability to expand services. Most cannot meet current minimum water pressures for fire protection. The result has been moratoriums or limitations on domestic water taps, which has resulted in requests to approve sources of domestic water that are generally not acceptable.

- <u>Sewage Disposal</u>. The common sewage disposal method in the unincorporated area is individual septic tank/leach field systems. This is adequate for areas of low density and suitable soils. The growing demand for smaller lots without regard to soils suitability is creating concern about the possibility of groundwater and surface water contamination. Compounding this, problem is the inability of some municipalities to expand their municipal sewer service.
- Fire Protection. The inability of many water providers to supply adequate pressure, and undersized water lines place unusual burdens on the local Fire Protection Districts. In addition, some County roads are not always able to handle modern fire trucks because they are too narrow, are not constructed to meet all-weather road standards and have steep grades.
- Schools. The school enrollment in Delta County increased by 838 students between 1990 and 1995. This is an annualized rate of over 4.2 percent which exceeds the population growth rate. The School District presently has classroom capacity for 444 students. The overall system is at 91 percent of capacity but there are several schools that are in excess of 96 percent. Garnet Mesa and Delta High School are over their rated capacity.
- <u>Housing</u>. Affordable housing and safe housing were issues that were raised at the County level. At this time there is a county-wide housing task force that is addressing the lack of affordable housing, senior housing and safe housing issues. This was not seen as an issue to be addressed at this time in the Master Plan.

The lack of standards for mobile homes in Delta County and the influx of older mobile homes that have been restricted from neighboring counties was raised in most planning areas. Mobile homes were recognized as an acceptable form of affordable housing that should be integrated into a community rather than segregated in mobile home parks, if health and safety standards are met.

 <u>Transportation</u>. The automobile is the primary source of transportation in Delta County and is likely to remain so. Public transportation is unlikely to become a significant factor in the County within the near future. Delta County participates in the Gunnison Valley Transportation Planning Region. The Region has developed a 20 year plan for addressing public transit and intermodal transportation issues, and meets regularly to review and implement the local and regional objectives of the Plan. The County's current transportation issues concern the County road system. The County road system is managed by three separate Road and Bridge Districts that are responsible for road improvements and road maintenance. Transportation as an issue separate from the County road system and capital improvements program is not addressed in this Master Plan.

#### Goal Statement

The growth policies of Delta County should ensure that the financial impacts of new development are paid by those who benefit, and that development is directed to those areas *where* there is adequate infrastructure and services.

#### Policies

A. New development must be fiscally equitable in that the investment in public facilities and services is an obligation of the developer and not subsidized by existing residents.

#### Implementation Strategies

- Develop a fiscal impact model that assesses the costs and benefits of new development and the cumulative effect of all subdivisions on rural services and facilities.
- Require that any fiscal inequities be addressed as part of the development review process.
- B. Development. should occur in and near municipalities where adequate Infrastructure is available and services can be efficiently provided.

#### Implementation Strategies

- the County and the municipalities should establish joint planning areas that define the urban service boundaries around each town.
- Municipalities should be encouraged to allow the expansion of their water and sewer service areas, to accommodate a reasonable rate of growth.
- The County should require that residents who benefit from any extension of municipal utility services must pay the costs of those extensions.
- Utility service districts should be formed to finance the improvements necessary for the expansion of municipal utility services.
- The County should explore an "Adequate Public Facilities" requirement for new development.

C. The County Capital Improvement Plan should help implement the Master Plan by directing capital Investment in ways that encourage sound growth management and by ensuring that the population standards for public infrastructure and services are adequate.

#### Implementation Strategies

- Develop a county-wide road improvement plan with input from local planning areas to prioritize road improvements and develop a long-range schedule for such improvements.
- Develop a county-wide water and sewer plan that contains an inventory of existing domestic water and sewer resources and identifies opportunities and constraints for expansion of such systems throughout the County.
- Update the existing County Capital Improvements Plan to ensure that existing public infrastructure, e.g. parks, libraries, roads, water, sewer, fire protection, administrative and maintenance facilities meet the standards for current and projected population growth.
- D. In areas of less Intensive development emphasis should be placed on the adequacy of the existing County roads and fire protection services.

#### Implementation Strategies

- Develop a county road classification system that establishes minimum travel safety and grade thresholds for existing County roads. New development should keep within these thresholds. If not, such development should pay for upgrading the road(s).
- Where water main sizes, storage or pressure is inadequate for minimal fire safety standards, alternative mitigation standards should be established.

#### IV Protect Private Property Rights

#### Introduction

All of the Planning Area Committees call for the preservation of property rights for all property owners. This is a value strongly embraced by the citizens of Delta County. Land use planning and land use controls, however, limit property rights. Land use planning reflects community goals that may conflict with property rights. The Planning Area Committees, in recognizing this conflict, have identified these issues.

#### Issues

- How can the County ensure the preservation of basic property rights and still engage in responsible planning and management of growth?
- How can the right of a property owner to use and enjoy his property be balanced with the rights of neighboring property owners to be protected against potentially adverse impacts on their property or their property values?
- How can individual property owners' rights to use and enjoy their land be balanced against the need and desire to protect and preserve the physical, economic and environmental resources that are valued by the majority of the residents of Delta County?
- How can individual property owner be protected against land use controls that demand unrealistic compliance and processing requirements?
- How can the County ensure that land use regulations that are designed to implement the Master Plan are responding to a real problem or the high potential of a real problem?

#### Goal Statement

The right to use, enjoy and protect property should not be diminished by policies and regulations that are not consistent with the goals and objectives of this Master Plan

#### Policies

- Any land use regulation or restriction adopted by the County must necessarily either:
   (a) protect the public health and safety,
  - (b) make fair and efficient use of public funds or

(c) provide for the orderly division, sale, development and financing of private property consistent with the goals and objectives of this Master Plan.

#### Implementation Strategies

 <u>Burden of Proof</u>. Implementation of the subdivision regulations and other County land use regulations will assume that a particular division or use of land should be authorized unless the division of land or use would violate existing regulations, would adversely impact neighboring property owners or residents, or contradict the goals and objectives of the Master Plan.

- The County should offer a variety of development options and incentives to landowners who develop, or who pursue the goals and objectives of this Plan.
- B. The right to develop and improve private property does not constitute the right to physically damage or adversely impact the property or property value or neighboring landowners.

#### Implementation Strategies

- In the implementation of the County's land use regulations the compatibility of a new development with the existing land uses should be given priority consideration.
- 2. In cases where there is incompatibility between an existing and *a* proposed land use, the property right of the existing use should be given priority.
- C. The right to own and use private property should not be adversely affected by unreasonably complex land use regulations or an unreasonable time frame for review.

#### Implementation Strategies

- All land use regulations should have a precise statement of intent and purpose and should be written clearly and concisely.
- Land use cases should include findings and be processed within a reasonable time frame. This time should be directly proportional to the complexity of the case and available staff resources.
- The County should develop a faster mechanism for property transfers within families, yet provide for the eventuality, that such parcels may be sold on the open market.

# V. Promote an economic climate that increases job opportunity and overall economic well being.

#### Introduction

The preservation and enhancement of the County's economic base is a prerequisite to achieving the goals of the Master Plan. The environment and rural lifestyle valued by the County residents depend on the availability of employment, jobs that pay a "living wage", and an economy that can provide basic goods and services. Experience has shown that the planning vision of a community suffers in economic downturns when planning standards are sacrificed for economic reasons.

The planning area committees recognize the critical interrelationship between the planning vision and the economy, and have identified these issues.

#### Issues

- Colorado's Western Slope economy has a history of "boom and bust" caused primarily by the cyclical nature of resource extraction industries such as mining. Delta County has been more fortunate than some areas because its strong agricultural base has cushioned the impact of these cycles. While mining will continue to be an important part of the County's economy, technological advances have increased production with fewer miners. Recently, the timbering and wood products industry in Delta County have declined. So the future of the traditional natural resource industries in the County is unpredictable and will be influenced more by national policy decisions and global economic trends than local efforts.
- There can be conflicts between the County's landscape and environmental goals and its economic development. Care must be taken to balance sound physical planning to protect environmental resources with realistic economic development.

#### Goal Statement

Promote and maintain a stable and diversified economic base that builds on local resources to sustain and expand existing businesses and create new business opportunities that are compatible with the quality of life valued by the residents of Delta County.

#### Policies

A. Encourage retention and expansion of existing businesses. Encourage new and different business opportunities and commercial, industrial and recreational activities that enhance existing resources and support and stimulate the County's economic base.

#### Implementation Strategy

The County should support the research necessary to determine how small local businesses can be assisted in their expansion efforts and how new enterprises could be started. The County should also support the business outreach programs designed to assist existing or potential new businesses.

B. Recognize that economic, development planning requires different skills and experience from land use planning, and that the primary responsibility for economic development lies with the focal and regional economic development organizations and the private sector.

#### Implementation Strategy

The County should give clear direction to the area planning committees and County staff that the responsibility for economic development planning lies with those local organizations that possess the necessary skills and experience.

C. Provide for cooperation between those involved in the planning process and the economic development organizations in order to coordinate economic development with the goals of the Master Plan.

#### Implementation Strategies

- 1. Provide for liaison between those involved in economic development planning and the planning area committee involved in the Master Plan.
- Provide the economic development planners with the general criteria that has been established by the planning area committees concerning what types of economic growth to encourage and what types to avoid.

#### PART THREE: IMPLEMENTATION SCHEDULE

Part III contains a suggested implementation schedule for completing the strategies recommended in Part II to accomplish the goals of the Master Plan. The strategies are condensed and listed under each major goal. The page number is noted where each strategy is stated in more specific detail. A time frame suggested to complete each strategy. For strategies that are on-going, no specific date is noted. The Implementation schedule suggests entities or organization that may be responsible for implementing each strategy. The Implementation schedule is not accorded in some and some suggested schedule to provide guidance to the County, its citizens and other entities that have a stake in the implementation of this Master Plan.

#### GOAL 1: PRESERVATION OF AGRICULTURAL LANDS AND AGRICULTURAL OPERATION

	RECOMMENDED STRATEGIES	PAGE	TIME FRAME	RESPONSIBILITY
1.	Identify and map important agricultural lands in each planning area	4	1997-1998	County/Planning, Areas
2.	Explore the feasibility of a Transferable Development Rights Program/ Pilot Project	4	When funding/	County/Planning Area
			grant allows	
3.	Establish liaison with agencies that advocate agricultural land preservation	5	1997-1998	Land Trust/GOCO/County
4.	Provide flexibility in subdivision review process	5	1996-1997	County
5.	Provide financial support for promotional and marketing programs	5	On-going	County/Ec. Dev. Orgs. /Try River
				Extension
6	Identify & publicize economic contributions of agricultural related businesses	5	On-going	County/Ec. Dev. Orgs. /Tri River
				Extension
7.	Conduct research/develop programs to add value to agricultural products	5		
8.	Encourage local economic development organizations to support value-added industries	5	On-going	DADI, Region 10
9.	County should recognize primary status of agriculture in adopting or revising County regulations	5	On-going	County
10.	Work with ag organizations to Identify land uses that have negative impact on agriculture	5	Immediate	County/local agricultural assns.
11.	Develop local review process for a change of land use or new development	5	Immediate	County, Planning Areas
12.	Include preservation of agriculture In the "Purpose" of existing regulations	5	Immediate	County
13.	Direct growth and infrastructure to protect productive agricultural lands	5	Immidiate	County
14.	Adopt a "Right to Farm" ordinance and educate newcomers about agricultural practices	5	Immediate	County

#### GOAL 2: PRESERVATION OF RURAL LILFESTYLE AND RURAL LANDSCAPE

	RECOMMENDED STRATEGIES	PAGE	TIME FRAME	RESPONSIBILITY
1.	Define a rural population and establish density levels for each planning area	6	1997-1999	Planning areas/County
2.	Prepare an objective public Information program on density limitations in Delta County	6	1997	County
3.	Undertake capital improvements planning for rural areas that meets rural needs	6	On-going	County/Planning areas
4.	Map the significant physical features and natural resources of each Planning Area	6	1997-1998	County/Planning. Areas
5.	Develop criteria for assessing impact of new development on physical features/environmental	6	1997-1998	County/Planning Areas
	Resources			
6.	Work with resource representatives to Identity land uses that may have adverse impact on	6	1997-1998	County/Area Resource & Public
	resources,			Agencies
7.	Develop mitigation standards to minimize adverse Impact of development on resources	6	1997-1998	County/Planning Areas/Resource
				Agencies
8.	Prepare resource manual of incentives available to landowners who. protect resources	7	1998	County Planning
9.	Develop a Resource Preservation Program to provide expediated review process	7	1996-1997	County
10.	Develop a Landowner Outreach Program to educate landowners of development options	7	1997-1998	County
11.	Review existing regulations to determine effectiveness In mitigating Impacts on resources	7	1997	County Planning/Staff/Attomey
12	Develop local review process for any change of land use/new development	7	1998	County/Planning Areas

GOAL 3: ENCOURAGE NEW DEVELOPMENT TO LOCATE IN AREAS WITH ADEQUATE INFRASTRUCTURE/PAY OWN WAY

	RECOMMENDED STRATEGIES	PAGE	TIME FRAME	RESPONSIBILITY
1.	Develop a fiscal impact model to assess costs/benefits of new development	8	1998	Planning Staff
2.	Address fiscal inequities as part of development review process	8	Ongoing	County
3.	Establish joint planning areas with County and municipalities	8	1997-2000	Planning CommissiorvMuncipalities
4.	Encourage municipalities to allow expansion of water and sewer service areas to accomodate	8	On-going	County/Municipalities
	reasonable rate of growth			
5.	Require residents who benefit from utility extensions pay for the extensions	8	On-going	County
6.	Establish utility service districts to finance improvements for municipal extensions	8	As needed	Residents/Developers
7.	Consider an "Adequate Public Facilities" ordinance to direct new development	8	1998	Attorney/Planning Staff
8.	Develop a county-wide road improvement plan		1997-1998	Road and
				Bridge/Commissioners/Planning Areas
9.	Develop a county-wide water and sewer plan	8	1998-1999	Planning Staff/Water/Sewer Providers
10.	Update the existing County Capital Improvements Plan	8	1997	County/Planning Areas
11.	Develop a County road classification system	9	1997	Road & Bridge/Commissioners
12.	Establish minimum mitigation standards for fire safety in areas with inadequate water supply	9	1996-1997	FireDept/Planning/Commissioners

GOAL 4: PROTECT PRIVATE PROPERTY RIGHTS

	RECOMMENDED STRATEGIES	PAGE	TIME FRAME	RESPONSIBILITY
1.	Assume new development/change of land use is permissable unless it violates regulations,	9	Ongoing	Planning Commission/Commissioners
	adversely impacts neighboring property owners or contradicts goals of the Master Plan			
2.	Offer a variety of development options and incentives to landowners	9	Ongoing	Planning Commission/Commissioners
3.	Give priority consideration to the compatibility of new development with existing development	9	Ongoing	Planning Commission/Commissioners
4.	Give priority to property right of existing land use when there is incompatibility with new	9	Ongoing	Planning Commission/Commissioners
5.	Land use regulations should have statement of intent and purpose and be written clearly and concisely	9	Ongoing	Planning Commission/Commissioners
6.	Provide findings and process land use cases in a timely manner	10	Ongoing	Planning Commission/Commissioner
7.	Develop a faster mechanism for property transfers within families	10	1996-1997	County

#### GOAL 5: PROMOTE AN ECONOMIC CLIMATE THAT INCREASES OVERALL ECONOMIC WELL BEING

	RECOMMENDED STRATEGIES	PAGE	TIME FRAME	RESPONSIBILITY
1.	Support new and existing business development to stimulate the County's economic base	10	Ongoing	Government/Private
				Sector/Education/SBDC
2.	Acknowledge that economic development planning lies with organizations with those skills	10	Ongoing	County/Planning Area/EcDevAssn
3.	Provide for liaison between economic development organizations and planning areas	10	Ongoing	County/Planning Area/EcDevAssn.
4.	Provide economic development planners with economic development criteria established by	10	On-going	County/Planning Area/EcDevAssn.
	planning areas			

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