DAVIS COUNTY SHORELANDS

Comprehensive Land Use Master Plan

Davis County Council of Governments
In Partnership With:

The Nature Conservancy of Utah

Envision Utah
A Partnership for Quality Growth

A Plan for the Conservation and Preservation of the lands along the Great Salt Lake

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Foreward

While growth is welcomed for bringing a period of economic prosperity to Davis County, it should be accommodated without threatening the fragile ecosystems of the Great Salt Lake Shorelands. This ecosystem is a valuable resource. The Davis County Shorelands Master Plan process has been crucial in helping Davis County and the Shoreland communities agree on a standard for the preservation of this important resource. The Plan presents a balanced approach with solutions to the problems found at the confluence of developable lands and sensitive lands.

Adoption of The Plan will give each City the tools needed to manage land use at a local level while preserving the regionally important resources of the Great Salt Lake Shorelands. This countywide approach to problem solving has helped unify the citizens of Davis County to work together towards solutions that can be appreciated far into the future.

The following chapters will discuss the important issues that are faced every day in Davis County as development meets the Great Salt Lake. This delicate interface between the lake and the land must be carefully studied and well understood before any plan is proposed.

Antelope Island:

The lands found along the shores of the Great Salt Lake in Davis County are unique. These lands are home to many species of birds and animals. A varied collection of fresh water and salt water wetlands creates diversity and beauty. The views across the Lake can be breathtaking.

The soil along the Lake is some of the most fertile in the State of Utah, and many of the residents who work the land are descendants of the first pioneers to enter the Salt Lake Valley. The Davis County Shorelands are a special place.

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Steering Committee

This Master Plan was created in accordance with the guidance of the Davis County Shorelands Steering Committee. The Steering Committee was created by the Davis County Council of Governments. This Committee was made up of residents and officials of the nine municipalities within Davis County. The Committee was charged with overseeing the creation and development of the Davis County Shorelands Master Plan. The members of the Steering Committee are as follows:

Gary Mecham; Syracuse City Council
Peter Matson; Layton Community Development
Tim Stephens; Woods Cross City Planner
John Thacker; Kaysville City Manager
Mayor Richard Harvey; Fruit Heights
Barry Burton, Wetlands Advisory Committee
Mayor Greg Bell; Farmington City
Wendell Wild; West Bountiful City Administrator
Carol Page; Davis County Commissioner
Brian Gold; Centerville City Council
Jerry Chatterton; West Point City Council
Stan Porter; North Salt Lake City
Amanda Eyre; The Nature Conservancy, Program Manager
Alex Beseris; Envision Utah, Project Manager
Brooks Carter; Army Corps of Engineers
Karl Kappe; Division of Forestry, Fire, & State Lands
Jim Newsome; Clinton City Planning Commission
Aric Jensen, Davis County Community Development

Consultants

Sear-Brown:
Sear-Brown was retained to assist the County and the Steering Committee with the creation of the Master Plan. Sear-Brown is a national engineering and planning firm.

Bio-West
Bio-West was retained as a sub-consultant for the Master Plan. Bio-West has vast expertise in wetland and upland systems, as well as in ecological implications of development alternatives.

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Chapter One:

A Discussion of Issues Leading to This Plan

The Great Salt Lake is a vast inland sea that is home to thousands of shorebirds that migrate thousands of miles between South America and the Arctic. The Lake has international significance as part of the Western Hemisphere Shorebird Reserve Network. The Lake represents a critical link in the survival of 33 species of shorebirds. Of critical importance to these birds are the un-diked natural wetlands on the eastern shore of the Lake which only occur in Davis County.

Active support for recreational uses along the Shorelands are increasingly supported by a growing constituency of conservation and outdoor enthusiasts. These uses include equestrian, walking/running, hunting, boating, and bird watching.

For the most part, the Davis County Shorelands, stretching from North Sale Lake north to West Point are untouched by modern development. Davis County residents value their agricultural heritage, sense of space and freedom, and the quality of life in their communities. They also respect private property rights and are experiencing rapidly increasing property value as a result of our robust economy. Before these lands are impacted by development, it is important to identify a systematic mechanism for enabling the protection of this resource while allowing for appropriate development.

Previous Efforts/ Previous Study

These sensitive lands have in the past received attention from regulatory agencies such as the Army Corps of Engineers and the Federal Emergency Management Agency(FEMA). However, most of the communities adjacent to the Shorelands had not addressed these sensitive lands within the context of their community's long range goals and zoning regulations. Any planning of these sensitive lands that had occurred had been on a limited scale and not within the regional context. Additionally, previous studies had not included opportunity for public response and endorsement. It was recognized that only through citizen endorsement of conservation and development would the Shorelands continue to be a great asset.

Sponsors of the Study

Given these reasons, the Davis County Council of Governments along with Envision Utah[1] and The Nature Conservancy determined that a comprehensive planning effort was needed.

This collaborative process included the nine Davis County municipalities which border the shoreline, Davis County, residents of the area, property owners, planners, conservation groups, regulatory agencies, and others to develop a publicly-supported plan that identifies areas for quality growth and preservation.

The study presented opportunity to envision future development, incorporating natural, agricultural, and recreational values into a plan for tomorrow's neighborhoods.

Directing The Planning Process

With each community having its own planning issues, long range goals, and zoning regulations, it became clear that the means to create a unified plan was to bring everyone to the same table. A Steering Committee was established to guide the direction of this work. The Steering Committee was made up of a representative from each of the shorelands communities and was crucial to the process.

The Steering Committee[2] was strategically involved in finalizing the scope of work, plan approach, project schedule, and scheduling the Public Community Workshops. The Committee reviewed the compilation maps, public comments, and determined possible issues to be addressed in subsequent public meetings. The committee was dedicated to the process of working together as a cohesive unit to address sensitive issues and to direct the project agenda. Sear-Brown worked closely with the Steering Committee during the course of the project.

[1] Envision Utah is a coalition of citizens, business leaders and policymakers in Utah's Wasatch Front area under the sponsorship of Coalition for Utah's Future. Envision Utah undertook an extensive community consensus process and with that input developed a 10-county area regional vision. The Davis County Comprehensive Shorelands Plan is part of Envision Utah's effort to support implementation of the strategies and goals articulated by the communities involved in the visioning process.

[2] The Steering Committee included council members, city planners, city managers, mayors, county commissioners, and representatives from the Wetlands Advisory Committee, The Nature Conservancy, Envision Utah, Army Corps of Engineers, and Department of Natural Resources.

The Importance of Wetlands

Only a few decades ago, wetlands were believed to be wastelands, areas not economically suited for farming that harbored mosquitoes and other nondesirable pests. Clearly, the most appropriate thing to do was to drain and clear them. With the support of bills such as the Swamp Land Act of 1849, wetlands began to be destroyed at a record pace that increased throughout the 20th century. Today, no fewer than 99 million acres remain, and each year at least another 300,000 acres are lost (Niering 1991[1]). In Utah 30 percent of our historical wetlands have already been eliminated.

Davis County:

This view of Antelope Island is found at the Davis County Causeway near Syracuse. These wetlands are typical of the high quality wetlands that are found in large quantities along the Great Salt Lake. A variety of bird species can be found in and around habitats of this type.

As population growth causes changes in water and land uses, the amount and quality of Great Salt Lake wetlands continues to be impacted. At the same time, flooding causes damage to residences and businesses where development pressure motivates encroachment on the Great Salt Lake and its wetlands.

Fortunately, the destruction has slowed because the value of our wetlands has been discovered. Wetlands sustain more life than almost any other ecosystem (as much as many tropical rain forests and more than most good farmland). With ample food supplies, wetlands encourage and sustain a multitude of species, adding greatly to the area's biotic diversity (Niering 1991). The Great Salt Lake wetlands are critical to migratory birds, providing a extremely important link in the Pacific Flyway between North and South America. Between two and six million birds, representing over 240 species, visit these wetlands annually. Not only do birds visit, but the Great Salt Lake is also the world's largest breeding location for the white-faced ibis (Plegadis chihi) and the California gull (Larus californicus), and the third largest breeding population of American white pelican (Pelicanus erythrorhynchos). One of the rarer guests that use the area for wintering is the American bald eagle (Haliaeetus leucocephalus).

As important as wetlands are for wildlife habitat, they also play a vital role in conserving a balance in the intensely manipulated human environment. The same plant life that provides food and cover also takes in carbon dioxide and releases great quantities of oxygen, much in the way rain forests do, but at a local level. Wetlands also contribute to water quality by catching sediment and consuming pollutants. Their vegetation can absorb phosphates and nitrates from agricultural and sewage run-off, and accumulate industrial pollutants, including heavy metals.

Many wetlands are integrally linked to our water supplies, replenishing groundwater aquifers and retaining and gradually releasing large quantities of water. For example, a 1 foot rise in the water level over 1 acre of wetland places 300,000 gallons of water in temporary storage without harming any plant or animal life. By storing flood water, reducing flood peaks, slowing flood waters, and increasing the duration of the flow after floods, wetlands also help minimize flood damage.

Of all the benefits gained from wetlands, the most difficult to quantify are aesthetic and recreational. As development intensifies, wetlands still offer some of the best remaining open spaces. As our understanding of how these complex areas maintain productive ecosystems increases, we should realize that if wetlands are preserved, the earth will remain habitable for its millions of species, including us (Niering 1991).

Contributions made by:
Bio-West, Environmental Sub-consultant

[1]*Niering, W.A. 1991. Wetlands of North America. Charlottesville (VA): Thomasson-Grant. 160 p)*

Watershed & Recharge Zone Importance

The Great Salt Lake is an important part of the Great Basin Drainage System. It is the terminating point for much of the water in the Great Basin Region. The watershed of the Lake includes much of northern Utah, parts of southern Idaho, and Wyoming. Once the water reaches the Great Salt Lake, there is no natural outflow. This results in a high salinity and mineral level, an ecological feature that is not found at this scale anywhere else in the Western United States.

Because there is no outflow from the Lake, the Great Salt Lake is an extremely sensitive ecosystem. Pollutants are not periodically flushed downstream, as they would be in a system with an outlet. Small changes in the surrounding watershed can serve to drastically change the composition of the Lake water. This can have a large effect on the wildlife, vegetation, and various lake industries.

Wetlands in the Watershed

The sensitivity of the Salt Lake's closed-basin ecosystem heightens the importance of shoreline wetlands, which serve as pollutant filtering systems. Wetland vegetation physically traps contaminant-laden sediments, uptakes nutrients, and helps chemically decompose toxic materials. Thus, shoreline wetlands provide a defense mechanism that helps prevent pollutants from degrading the Lake.

Regionally, riparian wetlands located many miles upstream also play an important role in the health of the Lake. Healthy riparian wetlands prevent bank erosion, filter pollutants, trap sediment, provide shading, and enhance in-stream aquatic habitat. These wetland functions help improve the water quality of tributary streams that enter the Lake. Stream-side wetlands also provide wildlife migration corridors between the Great Salt Lake and the Wasatch Mountains.

Both salt water and fresh water wetlands are found along the shores of the Lake. Some of these are natural, un-diked systems, while others are man-made, intensively managed systems. The diversity and scale of wetland types is what makes the Lake ecosystem such an attractive refuge for the wide diversity of wildlife it supports.

The Recharge Zone

The Great Salt Lake Basin includes both groundwater recharge and groundwater discharge areas. A major groundwater recharge zone lies along the Wasatch Front, at the interface between the mountains and the valley. Surface water from canyon streams infiltrates into both shallow and deep groundwater aquifers in this area. The valley upland area between the mountains and the Great Salt Lake serves as a recharge area for shallow groundwater. The valley transitions to a groundwater discharge zone at its interface with the Lake shoreline areas; specifically, the shallow groundwater that has accumulated in the valley uplands is released at this fringe, providing water to support shoreline wetland communities. Regionally, each of these distinct groundwater zones plays an important role in the proper functioning of the Great Salt Lake Watershed and ecosystem.

Effects of Development

Historically in Davis County, much of the land area between the mountains and the Lakeshore was used for agriculture. Agriculture is a land use that is compatible with the natural hydrologic function of this area as a ground water recharge zone. Rain and irrigation water that fall on agricultural lands are able to penetrate the soil and recharge the groundwater that ultimately feeds the freshwater wetlands along the Great Salt Lake shoreline.

When agricultural lands are converted to residential or commercial land uses, soils become compacted and much of the land area is converted to streets, sidewalks, driveways, parking lots, and rooftops. These impervious surfaces do not allow water to infiltrate and recharge the groundwater. Instead, water runs off rapidly, leading to increased flood flows in nearby streams. Storm water runoff from paved areas also picks up pollutant residues such as oils, salts, sediments, fertilizers, and pesticides. This runoff is discharged directly into local streams, degrading the water quality of these systems as well as downstream receiving waters. Studies have found that increased levels of impervious cover are correlated with reduced base flows and increased pollutant concentrations in streams (Schueler 1994[1]). Under high impervious cover levels, water bodies that were previously fed by sustained, groundwater-derived base flows now receive water in periodic "flashes" of poor-quality, high-velocity runoff.

Within Davis County, development of agricultural lands in the recharge zone has the potential to disrupt the hydrologic processes that currently provide lakeshore wetlands with a sustained, steady supply of high-quality water. Therefore, within critical recharge zone areas, it is important to preserve agricultural lands to the extent possible and to encourage the use of low-impact techniques where development occurs.

This document explores a number of development and land preservation options that will allow important ground water recharge functions to be maintained. The overall quality of the watershed will ultimately determine the health and quality of the Great Salt Lake and its ecosystems.

West Point:

This land use is an excellent example of land that is suitable, and currently functioning as a ground water recharge zone. There need not be standing water present for a land area to be a ground water recharge zone.

Contributions made by:
Bio-West, Environmental Sub-consultant

[1]Scheuler T. 1994. The importance of imperviousness. Watershed Protection Techniques 1(3): 7 p.

Internationally Significant Wildlife Habitat

From the tiniest brine shrimp to majestic birds of prey, the number of creatures found at and around the Great Salt Lake is truly amazing. Few places in the world match the significance of the Great Salt Lake's wildlife habitat. The watershed of the Great Salt Lake serves to support the Lake with the necessary salts and minerals to create this unique wildlife habitat area.

There are over two hundred different species of birds found at the Great Salt Lake[1]. Many of these species depend on the Lake for their very existence. For a number of species, the world's largest single breeding populations can be found at the Lake. In addition, the Great Salt Lake is a layover for thousands of birds as they migrate between Canada and Mexico. The location and uniqueness of the Lake habitat and ecosystem make the Lake a very important habitat for these birds.

International Significance

The Great Salt Lake is part of the Western Hemisphere Shorebird Reserve Network. This makes the Great Salt Lake an internationally important wildlife refuge. Certain species of birds migrate from locations in Mexico to Canada and back on an annual basis. The large number of birds that can be found indicates the importance of this resource. For instance there is a population of over 500,000 of the species Wilson's Phalarope. This is the largest staging concentration in the world. Over 280,000 Red Necked Phalaropes have been counted in a single day. 400,000 Eared Grebes, 160,000 California Gulls and 10,000 Snowy Plovers plus thousands of others use the Lake as their species' primary breeding ground. A number of Peregrine Falcons and Bald Eagles also make the Great Salt Lake their home.

The birds that visit and live at the Lake do so because of the Lake's unique habitat. The Lake's wetlands and uplands, including agricultural lands, provide a rich source of food and a unique habitat for breeding. Many birds nest in dryer upland areas, but live and search for food in nearby wetlands. In addition, the unique salt playas and mud flats of the area supply other food sources and habitat for bird species.

Food Sources & Habitat

One of the most important food sources is the brine shrimp and the brine fly[2]. These two organisms are plentiful in and around the Lake. It takes a unique ecosystem to support these species, as well as other important food sources that are found in coordination with the wetland and upland vegetation communities at the Lake. These wetlands help cleanse surface and ground water as it enters the Lake, thus preserving an uncontaminated water supply needed for the systems that support the brine shrimp and brine fly.

The life cycle of the brine shrimp is a very delicate process, found few places in the world. The Great Salt Lake supports the brine shrimp populations that in turn support the bird populations. Within the Lake there are two habitat types: The Planktonic Habitat and the Benthic Habitat. These two habitats that support the brine shrimp population, though separate, are closely linked, and would not be possible without the rich nutrients brought to the Lake from the surrounding watershed.

The Planktonic Habitat produces phytoplankton blooms (algae) early in the year. The brine shrimp cysts hatch near spring each year. A valuable lake crop, the brine shrimp use the algae as a main food source as they grow to become adults.

The Benthic Habitat supports the growth of the brine fly. Photosynthesis occurs in the Lake due to the production of blue-green algae that is formed on the Lake bottom. brine fly larvae develop on the Lake bottom and feed on the blue-green algae in the Lake. This process, coupled with the brine fly development process, serves to produce a rich supply of food for the large number of birds and other wildlife found around the lake.

To help preserve habitat and wildlife opportunities, a number of Wildlife Management Areas are found in Davis County. These areas are thriving due to the intact ecosystem of this region. These systems are truly interconnected. The impact on one aspect of the system will affect the entire system in one form or another. The regional approach to land use decisions discussed in this document is important for preserving the viability of the entire ecosystem.

Wildlife Management Areas:

There are a number of Wildlife Management Areas (WMA) found within the Davis County Shorelands Project. Included is the Farmington Bay Wildlife Refuge. Over 200 species of birds can be found at this refuge. In addition to these, there are lands owned and managed by private organizations such as The Nature Conservancy of Utah.

Habitats such as wetland vegetation, salt water playas, and mud flats, are important ecological elements that make the Great Salt Lake such an ideal place for so many species of birds.

Great Salt Lake Vicinity Map:
United States Geological Survey
Http://wwwdutslc.wr.usgs.gov/birds

[1] *Bird and wildlife information is available at the following web address, maintained by the United States Geological Survey: http://wwwdutslc.wr.usgs.gov/birds/index.html*

[2] *Lake Habitat and brine shrimp/brine fly information are available at following web addresses, maintained by the United States Geological Survey:*
Http://wwwdutslc.wr.usgs.gov/shrimp/index.html
Http://ut.water.usgs.gov/plankton/plankton.html

Associated Lake Industries

The Great Salt Lake's unique ecosystem and habitat serve to support various industries associated with the Lake. One important industry is the harvesting of brine shrimp cysts. One of the largest uses for these cysts is for the prawn industry. Prawn growers purchase the cysts as feed. This is a multi-million dollar industry. The size of the harvest of cysts is dependant on a number of factors, including weather patterns and lake salinity, but ultimately the health of the Lake's ecosystem and habitat directly influence how many cysts are available for harvest. As the health of the Lake declines, so does the potential crop of brine shrimp cysts. This loss also affects the rich food source of the wildlife habitat.

For bird enthusiasts, the Great Salt Lake is a paradise for bird watching. With thousands of birds representing over 200 different species, the bird watching opportunities are limitless. A number of bird festivals are held at the Lake in Davis County drawing bird enthusiasts from around the world. This industry brings an influx of people and is an economic draw for Davis County. The Antelope Island Causeway provides access to an entire island of wildlife diversity and bird watching opportunities. Antelope Island is also home to the bulk of the brine shrimping fleets.

Antelope Island:

This shrimp boat fleet is representative of the unique systems found at the Great Salt Lake. This rich ecosystem supports a number of wildlife habitats not found elsewhere in the inter-mountain west. These habitats, while providing for many species of animals, also provide an economic boost to the County. Brine shrimp harvesting is a large industry that relies on the Lake's ecosystem for its very existence.

Mineral extraction, such as a variety of salts, is a large part of the Lake's industry. The Lake's water is filled with a number of nutrients and minerals that have been washed into the Lake from tributaries that run from many different parts of the West. Since there is no outflow for the lake, these materials accumulate within the Lake.

The minerals being extracted from the Lake are a product of the Lake's overall ecosystem. The overall quality of the Lake, and its tributaries will determine how well the Lake can sustain these industries into the future. While the Lake can adapt to changing environmental conditions to a certain extent, large changes in the Lake's water quality and composition can greatly effect the ability of some of the industries to efficiently extract the valuable minerals.

There are many other industries that are based upon the Lake's resources. While only a few examples are listed here, there are many other companies using the Lake's resources for the basis of their operations.

Historical Character of Agriculture

Agriculture has been an industry in Davis County ever since the first Utah pioneers settled here after 1847. These early farmers recognized the lands along the Lakeshore as viable for growing crops and grazing animals. In fact, until recently, most cities in Davis County were rural in character with many residents rooted in the agriculture industry. Although this has changed significantly in recent years, farming is still an important industry along the Lakeshore as many of the open and agricultural lands remaining in Davis County exist in the western part of the county.

Climate Consideration

Early settlers realized that the climate along the Great Salt Lake has an advantage over other areas of Utah. The length of growing season here is one of the longest in the state. Typically, the Lake temperature is warmer than the air temperature. As the Lake emits heat into the air, it serves to warm the air over the lands adjacent to the Lake. This extends the growing season enough to make it possible to grow a variety of crops not typical in other parts of Utah. Crops that can be found in Davis County include carrots, onions, alfalfa, pumpkins, and corn. This "lake effect" used to explain the longer growing season along the Lake is also responsible for the increased snow fall that sometimes occurs near the Lake in winter months.

The soil along the Lakeshore in Davis County is also different from the soils found around the State. The lands above the wetlands and mud flats, although void of salt contamination found around the Lake, have not escaped the influences of the Lakes' watershed. As streams meander out of the mountains, they carry mineral deposits that are deposited on the soil in times of flood. These deposits help replenish the nutrients needed to grow crops.

City of Layton:

Existing Farm Fields near power line corridor.

This is representative of the existing farmland conditions found along the Lakeshore. The soil is very fertile in this area. Plus, the length of the growing season is longer along the Great Salt Lake than typically found in Utah.

Current Trends

Despite the unique growing conditions found in Davis County, the land available for farming is decreasing. Many farmers are ready to get out of the farming business and are anxious to "cash in" their holdings. Utah's strong private property rights support the notion that individuals should be allowed the opportunity to receive monetary gain from their land. There are measures available,(as identified in Chapter 4 :Implementation Strategies) which compensate the land owners while preserving the land for agriculture.

The ecological effects of development on the Lake and ecosystem are varied. It is commonly understood that development to the Lakes' edge results in the loss of a number of important resources including functional wetlands, diverse wildlife, and usable open spaces. However, other resources such as historic character and viable farmland are typically overlooked. Land that no one wants to farm doesn't appear to be a resource, and historic character is difficult to quantify. But, at second look, these two resources are very important.

Natural Resources

Soil and prime farmland should be considered a resource much like we consider water and timber as resources. Farmlands are essential to our lives. We need soil to grow crops and graze animals. Only certain soils can support these functions. As farmland is converted to development in Davis County, a resource is lost.

As the agricultural lands resource decreases, so does the historic character. Historic character is one of the elements that makes the area a desirable place to live. Historic places within a community provide a dimension that is not available through any other resource. Particularly in an age when commercial growth and urban sprawl reinforce the notion of "geography of nowhere", historic structures and landscapes provide a community with a sense of place and connectivity. These places bring written history to life. Many people desire to live in communities that feature a sense of place, and move to Davis County to obtain it. But, unfortunately, every new development built to accommodate these people slowly removes a bit of the historic rural character. The resource attracting people to the area is being lost.

There are a number of options for dealing with the loss of natural and historic resources. This document explores ways to allow farmers to retain their land for farming or retire without turning the land over to development. These methods provide options for cities to consider so that they receive needed tax base and preserve some of the rural character. Just like any resource that must be preserved for the future, farm land and historic character can be managed to enable its protection and efficient use.

Current Trends in Growth

New growth is an important part of our economy. New commercial and retail developments generate the needed funds to provide services to residents, while new residents provide the market for new retail developments. This is a cycle that is playing out in every community in Davis County. All this development takes land, and fortunately there is still a lot of very good land in the county at reasonable prices. This land, for the most part, is very suitable for development.

Development Trends

There are a number of trends in the development industry that are currently being followed in the communities of Davis County. Some of these trends follow home buyers' needs and desires. Developers and builders incorporate elements into their design that fill the needs of the home buyers. While a number of elements included in new developments are implemented by buyer demand, the majority of trends found in today's new developments are mandated by the current zoning within cities and towns.

Cities use a number of tools to control growth and development within their boundaries. Cities typically have a general plan that dictates what types of developments are allowed in various parts of the city. Each city in Davis County has a general plan in some form or another. The goal of The Plan is to chart a vision for what the city will look like as development takes place. Many general plans break the city into a number of zones. These zones are assigned specific land uses that are allowed within each zone. Typically, the density of the development is assigned by the type of zone, as well as the design guidelines for the allowed type of development.

Results of current zoning codes?

While each city approves new subdivisions and developments based on their current zoning codes, the desired goals aren't always met. A common trend in rural preservation is to zone land for one acre lots or larger with the intent to preserve the town's rural character. This is done to put fewer homes on the land, thus allowing more unbuilt space possibly suitable for farming or other activities consistent with the existing rural character. This low density residential zone is effective in limiting the number of dwelling units built on the land, but results in very little consolidated open space. These lots are too small to support farming and too large for most homeowners to maintain. When all is said and done, cities trying to preserve rural character are usually disappointed with the resulting one acre lot developments.

Cities also try to preserve rural character by implementing agricultural zoning within their cities. The hope is that while neighboring lands are subdivided, a few farms will maintain an open feel to the community. However, this rarely works. Most agricultural zones soon become subdivisions as many zoning ordinances allow agricultural lands to be subdivided. In these cases, agricultural zoning provides a false sense of security. In addition, farmers that choose not to develop their lands are typically subject to nuisance complaints associated with their farming practices. This causes headaches for all parties involved.

Cities typically have design guidelines that help form what new developments look like. Such guideline can help to preserve the rural character within the city. Besides size of lots, cities may mandate landscaping standards, street designs, building materials, and structure size. Many of these strategies are useful. Homes can be designed to look rural in character by designating the size of the building pad, and acceptable styles. Also, recreational features such as trails and parks are required for many new developments. However, these improvements are sometimes hard to notice when other requirements are implemented.

Many cities have ordinances that require new subdivisions to have wide streets and wide building setbacks. The result of this approach has been the typical subdivision. Neighborhoods often have no sense of place and no identifying features. These usually have street layouts that facilitate traffic flow, but do not allow pedestrian access to other parts of the community.

Current ordinances often remove the opportunities for creativity in new subdivision design. Zoning ordinances and design guidelines should set the proper parameters for new developments by encouraging creative design solutions. The rural character of a town can be preserved by design guidelines that encourage new developments to include features that are consistent with the existing character of the town, while discouraging features that are not.

City of Syracuse:

New Large Lot Development

This is representative of a trend in new development that is currently found in Davis County: homes built on fairly large lots. This example also includes open space in the form of a golf course.

A golf course is an economical way to preserve lands that may otherwise be developed as housing. However, there should also be some areas of consolidated open space available to the public as un-managed open space.

Chapter Two:

The Planning Effort

No attempt at a regional plan can be made without the input of the local community. There are so many issues at hand that no "expert" could claim to know them all. Landowners, residents, city and county officials, developers, conservationists, and concerned citizens all have a stake in the planning of The Davis County Shorelands. Each of these groups have a wide variety of ideas, concerns, experience, and opinions, each of which is very important to The Planning effort. Of course no plan will be perfect for everybody, but a good plan will address the issues and make recommendations as to their solutions.

This chapter explains how comments from citizens who attended the planning workshops were compiled, addressed and included in the plan.

An Inclusive and Informed Public Process

To ensure proper community involvement, a managed participatory planning process was created that coordinated the varied interests of each jurisdiction. A collaborative atmosphere was established in which land owners and other stakeholders came together in the planning process.

Rather than engendering heated debates over density and subdivision design, the Shorelands Plan enabled the residents of Davis County to plan for quality development and to identify and protect the natural and recreational features that make Davis County unique.

The specific planning process for creating the master plan included:

- Base Mapping
- Public Comment and Compilation
- Planning & Analysis
- Final Plan Synthesis

Base Mapping

The process included defining the project boundaries with each of the nine communities, allowing for specific circumstances. Initially lands to the east of the proposed Legacy Highway north of Farmington and lands west of the Legacy Parkway in South Davis County were included within the mapping exercise. As the boundaries of the study were further defined, it was agreed that the Legacy Corridor (in most cases) would be the eastern boundary for the Comprehensive Shorelands Plan.

Preliminary Mapping was prepared which included extensive technical data gathered from the State of Utah Automated Geographic Reference Center (AGRC). Aerial and land use maps were prepared at a Scale of 1"= 660' and included the following base information:

- City Boundaries
- The Nature Conservancy Management Area
- Legacy Parkway/Proposed Legacy Highway
- Existing Duck Clubs
- Proposed Legacy Wetland Preserve
- Flood lines including Federal Emergency Management Agency (FEMA), Army Corps of Engineers line (ACOE), and 4217 contour line.

Woods Cross City:

One of three public workshops held to gather public comment. Citizens and other stakeholders wrote and drew comments on large scaled maps. These comments were compiled and organized as the foundation of the Davis County Shorelands Master Plan

Another aspect of The Plan taken into account was the ecological considerations of the Lake and its important systems. Ecological data was gathered on migratory birds, other wildlife, wetlands, uplands, and watershed implications of the Lake. The services of an environmental sub-consultant were retained to ensure accuracy of the recommendations.

The best available resources and research methods were employed to prepare the base maps and to communicate technical data to non-technical participants so that the public could provide educated comments during the process.

Public Comment and Compilation

A series of workshops were held which began the process at ground zero[1]. In an attempt to get the entire spectrum of input from the public, each of the cities with land bordering the Great Salt Lake was asked to invite 100 residents to attend. The County took the initiative to invite representatives from environmental groups as well as state and local leaders. These representatives as well as a mix of developers, realtors, farmers, conservationists, residents, duck club members, Sierra Club members, and elected officials were invited.

Davis County was divided into a north, central, and south region with each being the focus of discussion at a regional workshop specifically targeted to that particular area. The central region (Region Two) and the north region (Region Three) were subdivided into two pieces due to the amount of area included to be studied.

The workshops began with an audio/video presentation by The Nature Conservancy of Utah and followed with an opportunity for stakeholders to participate in a hands-on land use exercise.

Sear-Brown facilitated the workshops, working together with the Stakeholders in small groups to identify existing land uses and to plan what future development, recreation, and critical land habitat designation should look like.

This activity, established and coordinated with Envision Utah, had participants place 10-acre color chips (designating specific land uses and development types) on large aerial maps. The mapping was designed in coordination with the State of Utah Automated Geographic Reference Center and allowed Stakeholders to easily portray their comments in graphic form. This process helped identify the issues, goals, and vision of The Plan.

[1] *The Region 1 Workshop was held on Sept. 27, 2000 and specifically targeted the communities of West Bountiful, Woods Cross, and North Salt Lake. The Region 2 workshop was held on October 12, 2000 and specifically targeted the communities of Centerville, Kaysville, and Farmington. The Region 3 workshop was held on October 26, 2000 and specifically targeted West Point, Syracuse, and Layton. Clinton participated as well even though their community did not border on the Shorelands.*

Planning & Analysis

At the conclusion of the three workshops, the resulting data and public input from the large maps were compiled and digitized into regional compilation maps showing the public's desired land uses for the county study area.

Davis County:

This photo is representative of the existing conditions found near the shorelands just west Kaysville. This land, historically used as farm land, is typical of the type of uses that are found along the Lake's shore. This rural character is a very desirable quality that residents want to preserve within their communities.

This was a complex process. Data from nearly 200 workshop participants had to be sorted and properly represented on the compilation mapping. Mapping was difficult due to the large area of land being studied. The mapping also required a careful study of the existing land use and general plans of the nine Davis County Communities. It was necessary to understand The Planning issues and long range goals of each community during the preparation of the Shorelands Plan.

A specific difficulty during the process was defining the location of important protection areas vs. critical protection areas. Although the process of creating the compilation maps was time consuming, it was extremely valuable to the project's outcome.

The planning process resulted in the public advocating a number of planning concepts for the Shorelands, demonstrating that conservation and development goals need not be mutually exclusive.

Planning concepts derived from the public process are included in the master plan. These are:

- No development below the FEMA Flood line.
- Maintain an agricultural buffer between shorelands and developable lands.
- Enact conservation development and transfer development rights ordinances to preserve land in sensitive areas.
- Transition land use (shorelands buffered by agricultural lands, low density development to high-density development).

County Wide Issues

As explained in Chapter One, a large number of issues were addressed in formulating the Davis County Shorelands Master plan. Decisions made at the local level can have negative effects on the Lake as a whole. It is the possibility of these negative effects that this Plan strives to avoid.

Howard's Slough:

Although Howard's Slough runs primarily through the City of West Point, its realm of influence runs both up and down stream. Any stream that runs through a community has regional implications for farmlands, water quality, wildlife habitat and recreational opportunities. Although these issues are regionally important, solutions to issues must be implemented locally. The Plan attempts to address these issues at the local level.

At stake are many acres of prime farmland, beautiful scenery, internationally important wildlife habitat, and an important ecosystem. While these items are on the minds of residents, they are also on the minds of others who live in the inter-mountain west. Many would like to see these resources forever preserved. Some of these resources help drive the statewide economy in industry as well as tourism.

Since the resources of the Lake are important, a key issue is how to preserve these resources while meeting the needs of the local communities. This is a complicated question with some complicated answers.

Solutions

It was apparent from the public workshops that many of the resources important ecologically were also important to local residents, however for other reasons. This makes a case for preserving these lands. It was recognized by workshop participants that there should be no development west of the FEMA Flood Line in most of Davis County. This recognition helps to preserve some of the most sensitive lands along the Lake shore.

Agriculture is an important historic use and resource in Davis County. It was apparent that many workshop participants desired to preserve some farmland. Agricultural land use is a compatible use that should be allowed to remain next to sensitive lands. It provides a buffer between development and the lands that would be affected if development was to occur nearby. Plus, some of the state's best agricultural lands are located along the Lake's shore.

New housing is a need for the growing communities along the Lake. Many communities want new developments within their boundaries to have a rural feel. Conservation developments (explained in Chapter Four) located in rural cluster housing areas can help obtain this feel, and are well suited to exist next to sensitive lands. This land use is a great way to transition between sensitive lands and developing lands. Denser developments with housing and retail, as cities see fit, should be located east of the rural cluster housing.

How this will help

Farmland will be preserved as a valuable resource. Wetlands important for wildlife habitat, water cleanliness, and ecosystem health will remain intact. Conservation developments will not interfere with ground water recharge zones or the natural flow of the ground water decharge areas. The rural feel will be preserved for all to enjoy, and new growth will not be a burden on the landscape. In short, a balance will be struck. This balance, can serve to improve the quality of life for all those living along the Lake's shore.

Local Issues

Each community expressed some concerns that they felt needed to be addressed in the Davis County Shorelands Master Plan. In some instances, overall planning principles for the region were adjusted to match a community's future plans for an area, or to match current approved city general plans. On the other hand, some cities had already planned on implementing some of the proposed planning principles. A balance was struck to ensure that each community was involved in the planning process. Some of the lands described are located within Davis County jurisdiction. These lands are mentioned here as associated with the nearest city as any new developments would most likely be serviced by these cities.

North Salt Lake
The lands west of the Legacy Parkway corridor within the City are to be preserved as a Nature Preserve as part of the mitigation required to construct the Legacy Highway. A portion of the land near the I-215/Redwood Road interchange is also proposed as open space due to access restrictions and land sensitivity. Any trail in the area shall follow the Jordan River, and not enter the nature preserve as it has been designated to protect wildlife and wetlands in the area.

Woods Cross
Although a small portion of land at the Legacy Parkway/500 South interchange will be developable, the majority of the land west of the highway corridor will not be developed. Most of this land is currently used by duck clubs. This use is unlikely to change due to the sensitivity of the land. Because the highway corridor bisects an existing private golf course, a new golf course has been proposed for the lands south west of the proposed interchange. This use will be compatible with the sensitive lands on site and the nearby nature preserve.

West Bountiful
There will be no development west of the Legacy Parkway, with the exception of an access road to a treatment plant and the Bountiful City Landfill.

Centerville:

This land is proposed for future development by Centerville City.

Each city along the shorelands in Davis County has a unique identity and community feel. It is important that each community uses the principles in this plan as they see fit. Although some concepts are important regionally, they can only be implemented properly at the community level. Each city made some recommendations of local concerns which were incorporated into the final plan.

Centerville
Centerville plans a future development between the Legacy Parkway Corridor and the D&RG Rail Corridor to the west. Wetland mitigation will likely be necessary in this area due to the nature of the site. It is possible that the southern portion will be mitigation lands for developing the northern most portion of the site.

Farmington
With a lot of land available for development near the FEMA Flood Line, Farmington has approved a new development as a conservation development that will result in many acres of land preserved as open space and farmland.

Kaysville
Lands west of the proposed Legacy Highway corridor are to be preserved as open space. This is due to access limitations as well as sewer service limitations.

Layton
Layton has no plans to annex any land west of the proposed Legacy Highway Corridor. Because of this, and due to the large land holding of The Nature Conservancy in this area, most of the lands west of the proposed Legacy Highway and south of Gentile Street will remain undeveloped.

Syracuse
Many acres of land remain west of the Legacy Highway corridor in the northern part of Davis County. This land will likely develop to the FEMA Flood Line. However, agriculture preservation techniques are in place to preserve a proposed agricultural buffer. A large amount of this land is already owned by the North Davis Sewer District as a buffer to their operations. Most of the land west of the FEMA Flood Line is already preserved and managed by The Nature Conservancy.

West Point
The City of West Point desires to limit development to lands east of the FEMA flood Line. Much of the land west of the flood line is currently in duck club use and not likely to change. The Howard's Slough corridor has also been identified for preservation.

Chapter Three:

The Davis County Shorelands Master Plan

The final product of the comments gathered from numerous public workshops and Steering Committee meetings have been incorporated into the final Davis County Shorelands Master Plan. This Plan is a compilation of comments, ideas, and opinions of those who participated in the planning process.

This chapter graphically portrays the desired land uses along the Davis County Shorelands. Chapter Four includes some land use policies and tools that can be utilized on the local level by communities desiring to implement the proposed land uses.

For graphic representation purposes, Davis County has been split into five maps. The map areas are loosely based on the original three regions where the public workshops were held and graphically represent portions of the Conceptual Land Use portion of the Davis County Shorelands Mater Plan. Every attempt has been made to ensure the quality and accuracy of this map. The Plan is intended as a conceptual recommendation for cities to adopt as an element to existing general plans. No attempt has been made to pass judgement on individual parcels in individual communities. Land uses have been generally placed in locations that appear to be appropriate. By adopting this Plan into their general plan, each community indicates their endorsement of these concepts.

The Plan: Map One

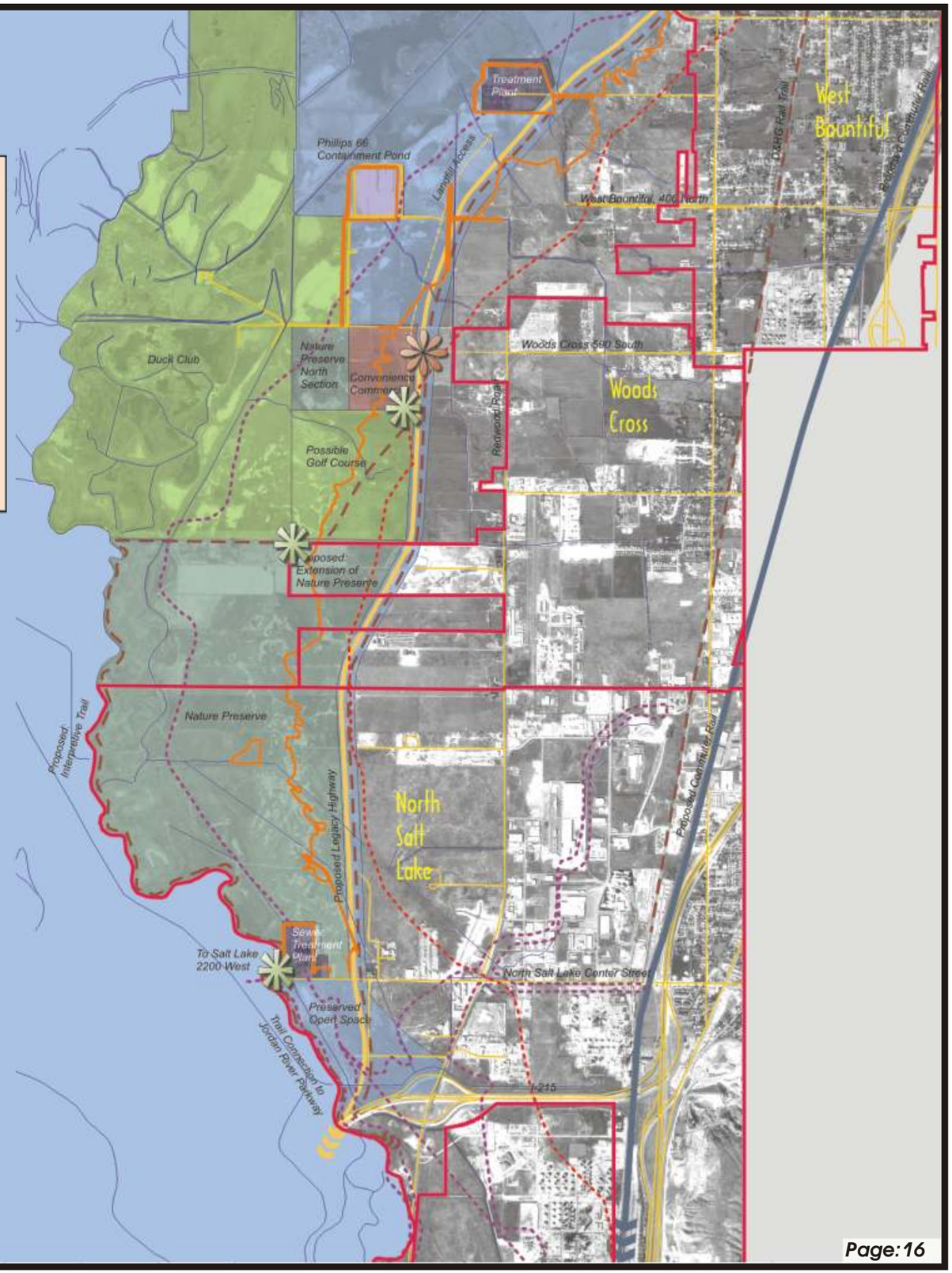
Map One:

Description

Including the cities of North Salt Lake, Woods Cross, and West Bountiful, Map One is the southern most portion of the Davis County Shorelands Study. The Legacy Parkway is the approximate eastern boundary for the study area. Most of the land west of the Legacy Parkway is to be preserved as a nature preserve as part of the mitigation for the highway construction. Another large portion of the land is held privately in duck clubs. This land will not be developed due to the nature of its use.

Planning Principles

No development is desired west of the Legacy Parkway Corridor, except for a small portion of land on the Woods Cross 5th South interchange. This land does not appear to have any development limitation. It is recommended that some of the lands to the south of the interchange on the west side of The Legacy Parkway be used in some form of recreational use. The lands north of the interchange along the west side frontage road are generally unsuitable for development. The road is the only access for trucks traveling to the landfill.



- Rural Cluster Housing
- Very Low Density Housing
- Low Density Housing
- Commercial Zone
- Business Park
- Utilities
- Preserved Agriculture
- Managed Open Space
- Nature Preserves
- Preserved Open Space
- Proposed Mitigation Zones
- Trail Head/Interpretive Center
- Proposed Highway Interchange
- Road System
- City Boundaries
- Army Corps Flood Line
- FEMA Flood Line
- 4218 Contour
- Trail System
- Proposed Commuter Rail Corridor

Legend of Map Elements

Regional Locator

North
Scale: 1:35000

DAVIS COUNTY SHORELANDS
Comprehensive Land Use Master Plan: Region 1

SEAR·BROWN
imagine it done.

The Plan: Map Two

Map Two :
Description
Including the cities of West Bountiful, and Centerville, Farmington, this map covers the narrowest strip of land in the shorelands study area. It is bounded by Interstate 15 on the east and Farmington Bay on the west. There are a number of sensitive wetlands along the Lakeshore in this area. Some will require mitigation as part of the Legacy Parkway construction.

Planning Principles
No development is desired west of the Legacy Parkway south of Centerville. In Centerville, from approximately Parrish Lane north to Glovers Lane in Farmington, the D&RG Rail Corridor becomes the western edge of development. Northward from Glovers Lane, the FEMA Flood Line becomes the western edge of development. Existing farmland that is located west of the no build line is an appropriate use for the area.

- Rural Cluster Housing
- Very Low Density Housing
- Low Density Housing
- Commercial Zone
- Business Park
- Utilities
- Preserved Agriculture
- Managed Open Space
- Nature Preserves
- Preserved Open Space
- Proposed Mitigation Zones
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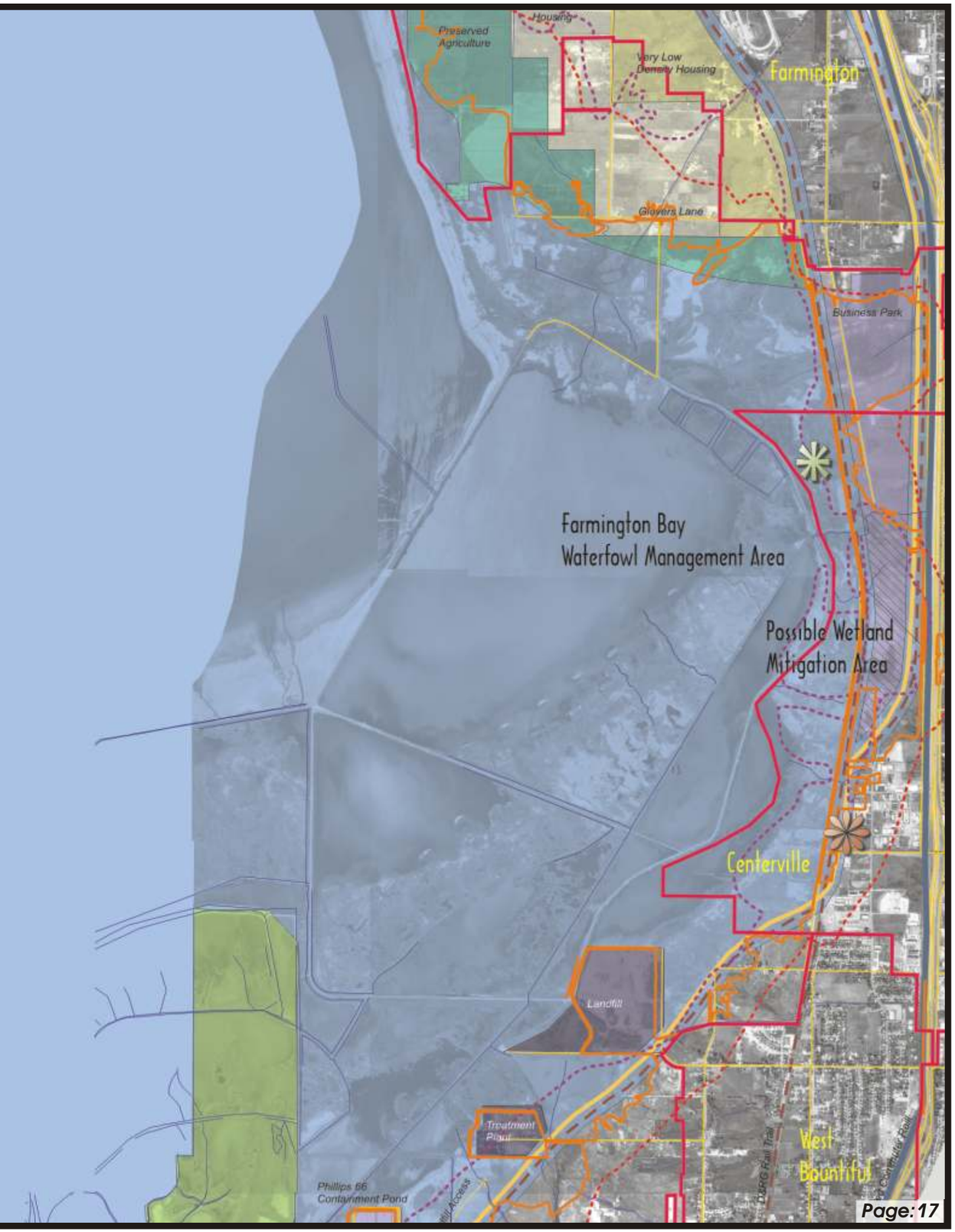
- Army Corps Flood Line
- FEMA Flood Line
- 4218 Contour
- Trail System
- Proposed Commuter Rail Corridor

Legend of Map Elements

Regional Locator

North
Scale: 1:35000



DAVIS COUNTY SHORELANDS
COMPREHENSIVE LAND USE MASTER PLAN: REGION 2A

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The Plan: Map Three

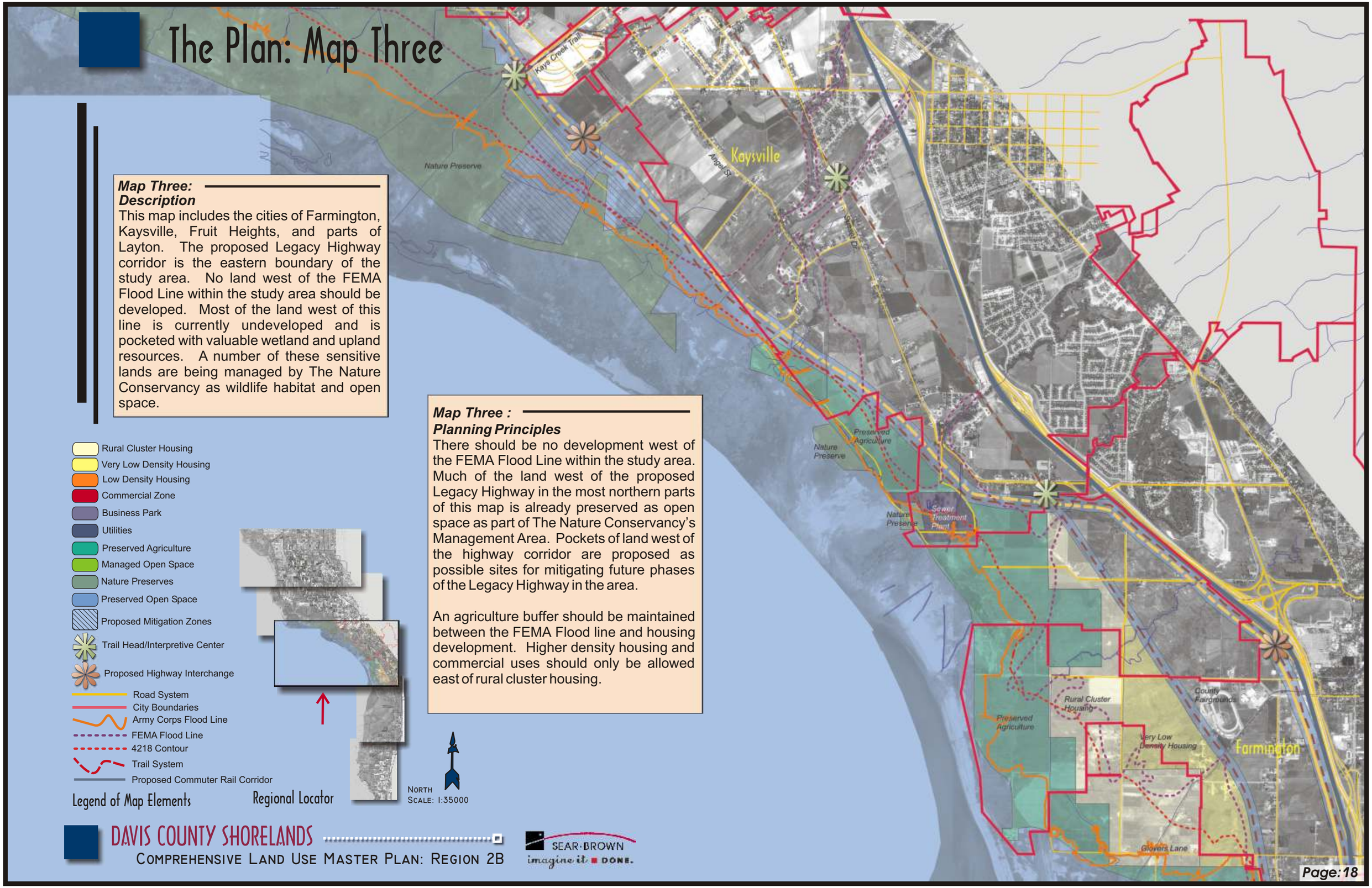
Map Three: Description

This map includes the cities of Farmington, Kaysville, Fruit Heights, and parts of Layton. The proposed Legacy Highway corridor is the eastern boundary of the study area. No land west of the FEMA Flood Line within the study area should be developed. Most of the land west of this line is currently undeveloped and is pocketed with valuable wetland and upland resources. A number of these sensitive lands are being managed by The Nature Conservancy as wildlife habitat and open space.

Map Three : Planning Principles

There should be no development west of the FEMA Flood Line within the study area. Much of the land west of the proposed Legacy Highway in the most northern parts of this map is already preserved as open space as part of The Nature Conservancy's Management Area. Pockets of land west of the highway corridor are proposed as possible sites for mitigating future phases of the Legacy Highway in the area.

An agriculture buffer should be maintained between the FEMA Flood line and housing development. Higher density housing and commercial uses should only be allowed east of rural cluster housing.

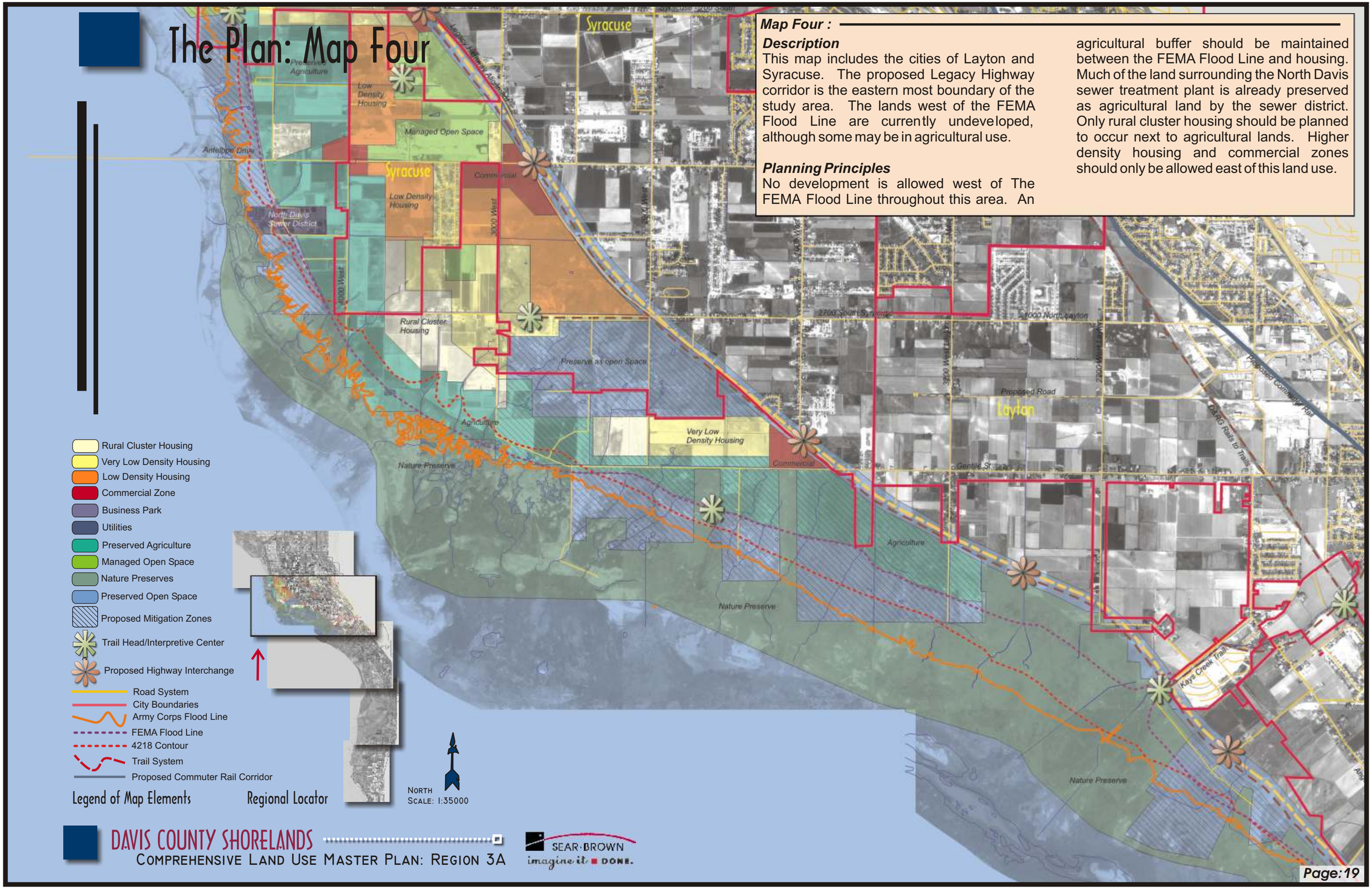


DAVIS COUNTY SHORELANDS

COMPREHENSIVE LAND USE MASTER PLAN: REGION 2B

SEAR·BROWN imagine it DONE.

The Plan: Map Four



Map Four :

Description

This map includes the cities of Layton and Syracuse. The proposed Legacy Highway corridor is the eastern most boundary of the study area. The lands west of the FEMA Flood Line are currently undeveloped, although some may be in agricultural use.

Planning Principles

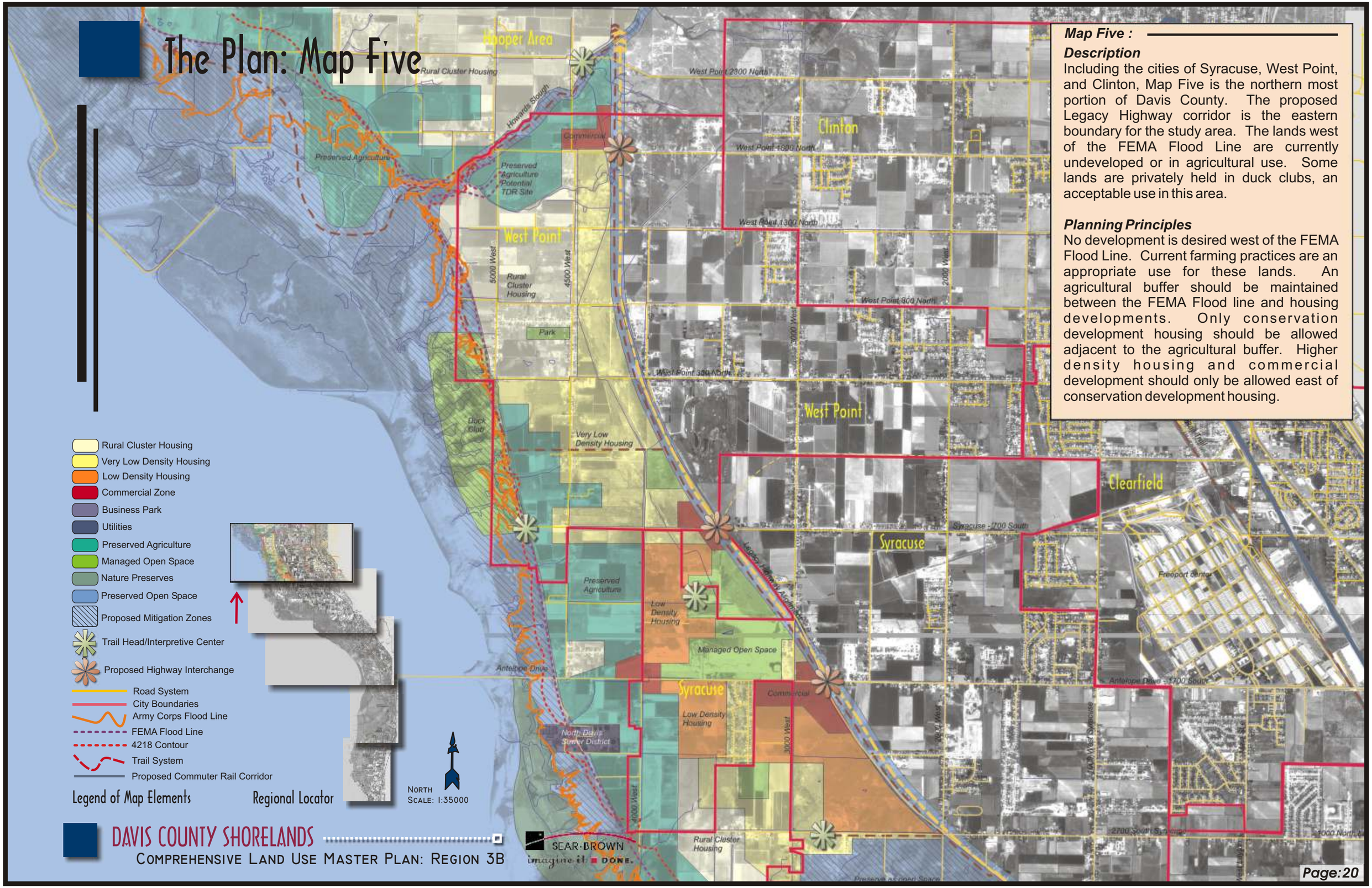
No development is allowed west of The FEMA Flood Line throughout this area. An agricultural buffer should be maintained between the FEMA Flood Line and housing. Much of the land surrounding the North Davis sewer treatment plant is already preserved as agricultural land by the sewer district. Only rural cluster housing should be planned to occur next to agricultural lands. Higher density housing and commercial zones should only be allowed east of this land use.

DAVIS COUNTY SHORELANDS

COMPREHENSIVE LAND USE MASTER PLAN: REGION 3A

SEAR·BROWN imagine it DONE.

The Plan: Map Five



Map Five :

Description

Including the cities of Syracuse, West Point, and Clinton, Map Five is the northern most portion of Davis County. The proposed Legacy Highway corridor is the eastern boundary for the study area. The lands west of the FEMA Flood Line are currently undeveloped or in agricultural use. Some lands are privately held in duck clubs, an acceptable use in this area.

Planning Principles

No development is desired west of the FEMA Flood Line. Current farming practices are an appropriate use for these lands. An agricultural buffer should be maintained between the FEMA Flood line and housing developments. Only conservation development housing should be allowed adjacent to the agricultural buffer. Higher density housing and commercial development should only be allowed east of conservation development housing.

DAVIS COUNTY SHORELANDS

COMPREHENSIVE LAND USE MASTER PLAN: REGION 3B

Chapter Four:

Implementation Strategies

No master plan is useful unless there is a way to properly implement the strategies listed within it. This chapter lists some tools that will be helpful for implementing the land uses proposed in the Davis County Shorelands Master Plan. These tools are by no means a perfect solution to every problem. However, they are a good starting point and can be used on a community by community basis to implement the proposed land uses graphically portrayed in chapter three.

Each of the tools available is best used for a specific desired effect. The proper use of these tools in the proper location and context can solve many land related issues. Each tool can be implemented properly, as well as improperly. The improper use of these tools will cause problems and make any existing problem harder to rectify. The best way to solve issues is a balanced approach to land use that provides a number of tools and options to landowners, developers, and city officials.

These strategies are provided within Utah's strong property rights traditions and identify arrangements that are incentive rather than regulatory based. These strategies can be implemented while still maximizing local control.

It is hoped that each municipality will begin the implementation process by adopting the appropriate portions of The Plan as an element of their community's general plan. This step will be the first to ensure that the vision of the Shorelands Master Plan moves forward.

In addition, it will be critical to the implementation process that the Steering Committee continues to function. This will allow greater voluntary coordination of local plans with the Shorelands Master Plan.

The Steering Committee should continue to:

- Encourage one another toward implementation.
- Coordinate implementation efforts.
- Identify new funding mechanisms.
- Develop benchmark objectives for the application of these concepts.
- Identify new implementation strategies.
- Provide an opportunity for coordination of local plans with the Shorelands Master Plan.
- Develop a checklist for local community self-certification to give local communities an opportunity for comparing their plans with the Shorelands Master Plan for consistency.
- Identification of opportunities for regional application of Transfer of Development Credits.

Protecting Agricultural Business

A number of tools can be used to help preserve the agricultural land of a community. Most of these techniques focus on preserving large parcels of farmland and keeping them in production. While there are many ways to keep farmland undeveloped, there are fewer ways for keeping farmland profitable. Although this document primarily focuses on how to preserve the agricultural land and sensitive open spaces, we also suggest ways of keeping farming profitable as a desirable land use within the Davis County Shoreland Communities.

Inevitably there will be farmers who simply are no longer interested in working their land and cannot find anyone interested in taking over operations. This is a situation becoming more common throughout the County. Solutions to this problem are tied to the profitability of the land.

Zoning Strategies:

Agricultural zones should not be holding zones for future development. Agriculture zoning should be a means of preserving agricultural land use and should help maintain that use by not allowing agricultural zoned lands to be subdivided. Cities should change agricultural zoning to allow land uses that are related to the agricultural industry found on the land. These may include food processing and sales, as well as food, equipment, and supply storage.

Other land uses associated with farming can be allowed in agricultural zones. These land uses are meant to enhance the rural character of the land, while keeping it in an agricultural use. Examples of this concept are restaurants and bed & breakfasts.

Protecting Agricultural Business

Farming has been an industry in Davis County for many years. However, the profitability of farming has declined in recent years. This drop in profitability makes it hard for farmers to stay on their land. If cities want the agriculture industry to remain in their communities, the value of the land for farming must be increased. This may be accomplished by allowing farmers to carry out operations on their land that may not be typically allowed in an agricultural zone. These operations may include processing of the crop that the farmer grows. This may allow the farmer to produce and sell the product directly to consumers. This cuts out the middleman and directs more profits to the grower.

Many communities around the inter-mountain west are known for their farmer's markets. Residents can drive directly to the source to buy fruits, vegetables, and even dairy products that have been processed by local farmers. There is a market for locally produced fresh products. Road side stands and markets distinguish a community and help preserve a community's rural atmosphere.

Sometimes farmers find it profitable to have uses associated with their operations that aren't necessarily farming oriented. These operations can add profitability to the land without removing the land from the farming use. An example of this concept may be a bed & breakfast or restaurant. The historic Knott's Berry Farm in Southern California is a world renowned example of this. While operating a bed & breakfast or small town restaurant is not feasible for everyone, it is a concept that has great potential and helps the rural economy stay viable.

Farmers may also consider such operations as food, supply, and equipment storage. Equipment repair may also be a viable option. In addition, they may also consider the ecological tourism market, such as bird watchers. These and other uses can add profitability to the land.

Required Strategies

For the agricultural zone to function properly, the zoning codes cannot allow the land to be subdivided. If subdivision of land for development is an allowed use, there will likely be little preserved farmland remaining over time. However, a density would be applied to this land if a transfer of development rights(TDR) was to take place. A TDR, explained further on following pages, allows the landowner to receive the equity for the land as if it were to be developed. The density that is applied to the land is allowed to be bought and transferred to another parcel of land. This is an important tool to use in conjunction with the agricultural zone.

The following is a sample process for enacting an agricultural protection area. The lands in these areas should have the proper agricultural zoning that excludes subdividing as an allowed use as well as ordinances that protect farmers from nuisance complaints of neighboring residents.

Agricultural Protection Planning Practice

Designate an agricultural protection area.

Utah Code, Title 17-41-201 provides for Agricultural Protection Areas. According to this law, local ordinances must exclude normal and sound agricultural operation or activities from public nuisance definitions if they are located in "agricultural protection areas." This legislation helps farmers defend themselves from nuisance claims from encroaching suburban residents. To take advantage of this state law, the city or county government must designate the land as a protection area. Preliminary steps include a signed petition of the majority of property owners in the prospective area.

Protecting Agriculture as a Business
Contributions made by:
Envision Utah, A Partnership for Quality Growth.
"Urban Planning Tools For Quality Growth"

USDA Programs

A number of Federal Government programs are designed to help farmers improve their lands for conservation. These programs typically pay a farmer a certain percentage of their costs for conservation improvements. Various time restrictions are attached to these programs. These programs are available through the USDA Natural Resources Conservation Service. Robert Sennett, (801) 524-4566, is the current local manager of these programs.

USDA Funded Programs:

The United States Department of Agriculture has a number of programs that help farmers improve the environmental quality of their operations land while improving their financial outlook as well. These programs help reimburse land owners for voluntary improvement to the land.

At this time, three funded programs with application to the Davis County Shorelands are available.
These are the Environmental Quality Incentive Program (EQIP), the Wetlands Reserve Program (WRP), and the Wildlife Habitat Incentives Program (WHIP).

Environmental Quality Incentive Program (EQIP)

The purpose of this program is for the improvement of irrigation and animal waste systems and range improvements. The program has broad application for the use of its funds.
Contract Limitation- Varies. 10-15 years. (Herbaceous Plantings only- 10 year limitation; Woody Plantings - 15 year limitation.)
Cost/Share- Reimbursement for up to 50% of the total amount paid out. Expenses reimbursed can include fencing and site preparation.
Land Value Payment- Pays $10/acres times the life of the contract. (Payment is made up front.)
A number of other incentives attached to this program, such as a rental fee, a maintenance payment, and an additional 40% bonus payment once completed.
Restrictions- The land must be either cropland or riparian buffers on marginal pastures.

Wetlands Reserve Program (WRP)

Within this program there, the land owner can utilize three options. Congress sets limitations on the program each year; however, the program is not limited by dollar amount, but by total acreage allocated each year to receive this funding. It is expected that the total acreage will continue to increase on an annual basis. Availability of funds for Utah projects will be dependent upon demand for the same funds from other parts of the country. This program has been extremely popular and is under the Farm Bill. The Farm Bill is up for renewal in 2002. Due to its popularity, it will most likely be renewed.

Option 1-
Purpose- Riparian Restoration. The corridor has to be associated with a recognized conservation easement and ownership must be by a recognized entity.
Contract Limitation- 10 Years (After the 10-year period expires, the land returns back to the landowner with no restrictions attached.)
Cost/Share- Reimbursement for up to 75% of the total amount paid out.
Land Value Payment- Pays up to 75% of the appraised agricultural value of the land impacted.

Option 2-
Purpose- Restoration only.
Contract Limitation- 30 Years (After the 30-year period expires, the land returns back to the landowner with no restrictions attached. The easement is held by the NCRS.)
Cost/Share- Reimbursement for up to 75% of the total amount paid out.
Land Value Payment- Pays up to 75% of the appraised agricultural value of the land impacted.

Option 3-
Purpose- Restoration only.
Contract Limitation- Permanent Easement (The land remains in perpetuity as an easement).
Cost/Share- Reimbursement for up to 100% of the total amount paid out for restoration.
Land Value Payment- Pays up to 100% of the appraised agricultural value of the land impacted.
Examples-

- Swaner Memorial in Synderville Basin (includes 530-acres in a wetland preserve);
- Mike Stangl property in Box Elder County (includes 1000-acres with restored wetlands);
- Richfield area (includes an 80-acre parcel)

Wildlife Habitat Incentives Program (WHIP)

This program is strictly a cost/share opportunity related to fish and wildlife habitat enhancement. The program's first priority is the enhancement of shelter belts through the re-establishment of woody plant materials as windbreaks.

Funding is determined based on recommendations of local conservation work groups. A State Technical Committee reviews the applications. Currently, Skip Nelson is the State Conservationist. Originally part of the Farm Bill, the Wildlife Habitat Incentives Program funding has been reduced substantially in the last year. In 2000, Utah received $130,000 of the 20 million dollars allocated nationally.

Conservation Easements

Conservation easements are one of the most widely used tools available for protecting sensitive lands. A conservation easement is the purchase of development rights for a piece of property that keeps a parcel of land undeveloped for perpetuity. The buyer of the development rights is typically a conservation group or government entity. The seller of the rights is the land owner. The purchase price for the development rights is negotiated between the buyer and seller, and is typically based on fair market value for the development right. In exchange for selling the development rights, a conservation easement is placed on the land. This easement is held either by the purchasing agency or sold or exchanged with a conservation management group or agency.

Economic Considerations

The concept of a conservation easement can be a very profitable situation for land owners. Land owners retain ownership of the property, but are still able to receive the value for the land as if they had sold it. Farmers are able to continue working the land as they had previously, thus earning the income they have historically expected. Land owners are also able to earn significant tax benefits as a result of the conservation easement. Since there is no development value to the land, the land is taxed at agricultural value instead of fair market value. When the farmer or landowner no longer wants to work the land, they may sell the land to another buyer who is willing to carry out the same use on the land. Thus the land owner is able to receive the value of the land itself in addition to the development value of the land.

Aspects of the conservation easement must be carefully addressed to ensure the future profitability of the land. The conservation easement will specifically state what land uses are allowed to take place on the land. In some cases, only the historic use is allowed.

The Nature Conservancy:

The Nature Conservancy of Utah is a group that specializes in raising funds to purchase conservation easements on sensitive lands. The Nature Conservancy owns and manages over 4000 Acres of land in Davis County. This land is managed for wildlife habitat and bird hunting. Some of the land is also used for agricultural purposes. This land will be kept as open space for perpetuity.

This can be troubling if the market for the historic use drops or disappears. Landowners should take into consideration additional uses that may be profitable for the land and have them written into the easement. These uses may include operations such as processing and sales facilities, food, supply and equipment storage, as well as possible bed & breakfast services. These operations usually do not ruin the historic character of the land and improve the probability of future profitability of the land.

Funding Sources

A number of groups and agencies have funding available for purchasing conservation easements. Conservation groups are a huge source of funding for conservation easements. In Davis County, The Nature Conservancy of Utah currently owns and/or manages over 4000 acres of land along the Great Salt Lake. This organization specializes in raising funds for purchasing these conservation easements. Numerous other organizations have similar funding available.

The State of Utah has allocated some funding for the purchase of sensitive lands. The Quality Growth Act, passed in 1999, created the LeRay McAllister Fund. This fund has over $3 million appropriated annually for purchasing land conservation easements. This and other programs are helpful in obtaining the necessary funding for purchasing conservation easements.

The Utah Department of Transportation(UDOT) has purchased approximately 1500 acres of land in South Davis County as wetland mitigation lands. These lands are to be preserved in perpetuity as open space in response to the wetlands affected by the first phase of the Legacy Parkway in South Davis County. Future phases of the highway will also affect a number of acres of wetlands. At the time that future phases are constructed, more mitigation lands will need to be purchased by UDOT. Many acres of sensitive lands can be preserved by this funding source. These lands may not necessarily be farm lands, but they should be lands that for many reasons would not be profitable for development due to environmental restrictions.

More money will become available for preservation as time passes and open lands become scarce. While it may take some patience and a lot of effort to raise the funding necessary, the results can be very rewarding.

Contributions made by:
Envision Utah, A Partnership for Quality Growth.
"Urban Planning Tools For Quality Growth"

Transfer Development Rights

The Transfer of Development Rights (TDR) is a concept for land preservation that has not been used extensively in the inter-mountain west. However, the concept has proved a useful tool in other areas of the country. The concept has been gaining in support in Utah recently due to the quick pace of growth in many communities. While cities enjoy the financial benefits of growth, they are also eager to preserve sensitive lands and open space for the enjoyment of residents.

Transfer of Development Rights cannot occur without the proper mechanisms in place. Municipalities must enact codes and ordinances that allow the Transfer of Development Rights from one location to another. The transaction can be tricky if the transfer occurs between two different municipalities. Community leaders must have the ordinances in place for this type of situation. The recognition of a countywide planning effort is very useful for the TDR process. As sensitive lands are important in the function of the regional ecosystem, countywide development right transfers are important for preserving these lands and building regional town centers.

The TDR Mechanism

For TDR to take place, there must be a willing buyer and a willing seller. The seller's land must be located in a "sending zone", usually designated for land preservation and protection. The buyer must be transferring the development rights to "receiving zones," designated as areas desirable for higher densities such as town centers and transit stops.

A TDR is similar to a conservation easement in that the development rights of the sending zone land are purchased while the landowner retains ownership of the land. The land is left to be used as per its historic use, typically farmland or open space, held in a conservation easement. This easement can be held by the city, county, or conservation group. A TDR differs from a conservation easement in that the development rights are allowed to be sold and applied to another parcel of land.

For a TDR to function properly, the sending and receiving zones must have the proper zoning applied to them. The sending zone must have an allowed development density set for the land so as to know how many development rights are available to be sold. The receiving zone must also have a set allowable density, but based on the typical large lot zoning found in the surrounding areas, not based on the desired higher density. When the development rights are purchased from the sending zone, the allowable development drops to zero units per acre, while the receiving zone density rises to the existing allowed density plus the added density from the sending zone.

An agricultural zone is a land use type that may be found in many sending zones. An agricultural zone, while not allowing development as a use, should have a density applied to it as part of the sending zone designation. This is necessary to determine what density can be transferred to a receiving zone. Since the land is in an agricultural zone, the density applied to the land is only usable as part of the TDR process.

While the concept may sound fairly simple, the density ratios between the two zones may be very complex or varied. The ratio of density between the sending and receiving zones must be determined and adopted with the intent of not adjusting them under pressure from landowners or developers. For example, if the receiving zones density is adjusted to meet the request of a party involved, the incentive of buying development rights for higher density may be lost.

Incentives

In some instances, a community may offer incentives to a developer for purchasing development rights. The land in a sending zone may be so important that a city may grant a developer additional units in a receiving zone, beyond what is purchased from the sending zone. Although this incentive process is useful for preserving lands, overall receiving zone densities should be carefully watched to prevent incompatible densities within a community.

The TDR process, while regulated by codes of the community, can take place between property owners without the intervention of government officials. The buyer can negotiate with the seller for the cost of the development rights. It is important that the compensation for the development rights be determined by market conditions for the area as to make the process fair for all parties involved.

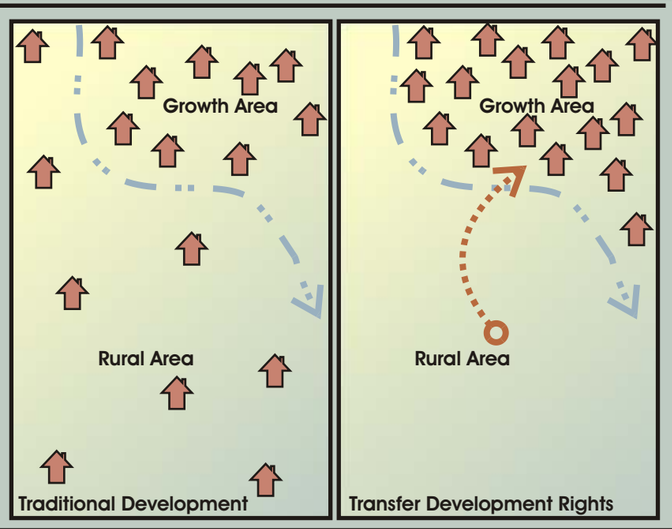
Zone Determination

When determining where sending and receiving zones will be located, it is important to choose lands that fit within the general plan for the city or county. Sending zones should be located where the general plan designates farmland or open space, while receiving zones should only be located where higher density is desired. Designating these zones in locations that don't legitimately meet the requirements for a sending or receiving zone may allow these types of trades to occur without any sensitive lands being preserved.

Transfer Development Rights Conceptual Diagram:

The transfer of development rights is a method of preserving lands that can be very useful where it is not possible to sell development rights to conservation groups.

The transfer of rights will allow land owners to receive value for their land, as well as retain and work the land as they previously had. In addition, the buyer of the development rights can use them on other parcels to increase the density of their development and improve profitability.



The TDR concept will not work in every community. If a lot of good developable, inexpensive land is available with no reason for high density development to occur, there will be no financial incentive for a developer to purchase development rights. Receiving zones must be located in areas of fairly high land prices, thus making extra density necessary for financial success of a project. Transit stops, pedestrian centers, and town centers are good locations for receiving zones. Codes for these types of areas should be examined to ensure that requirements don't make a TDR impossible. Landscaping requirements, building setbacks and height requirements, street widths, and parking requirements may have to be adjusted to allow for higher density developments to take place. In addition, creative design solutions should be sought in these areas to ensure that appropriate developments are constructed.

The process of enacting TDR codes and ordinances is a precise process that must be completed with caution. These codes must be specific to each community, while allowing coordination with neighboring communities. City leaders should recognize the county wide planning application of this concept. Regional town centers or transit stops may be in different communities than the region's sensitive lands. The acceptance of a countywide planning effort for sensitive land preservation will require neighboring communities to work together in order to identify sending and receiving zones. Working together with neighboring communities is an important aspect of the TDR process.

Transfer Development Rights

Example Scenario:

As development approaches this rural community, local planners have decided to zone the land at a density of one unit per five acres. They have done this to try to preserve the rural atmosphere of the community.

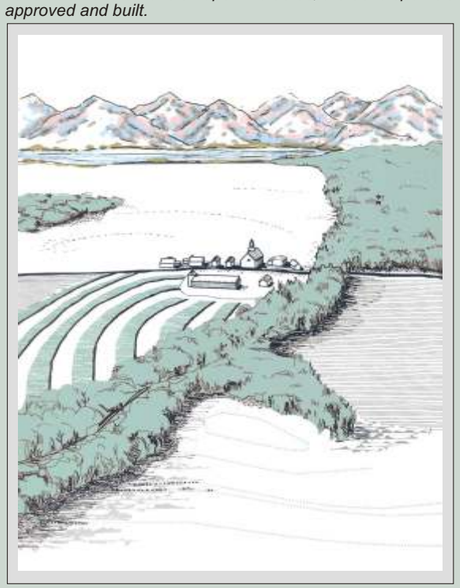
Existing Landscape:
This sketch depicts an existing landscape. It is a rural community surrounded by farmland and natural countryside.

Option One:
The developer purchases some land and approaches the local planners. No TDR mechanism is in place. Option One is approved and constructed at one unit per five acres.

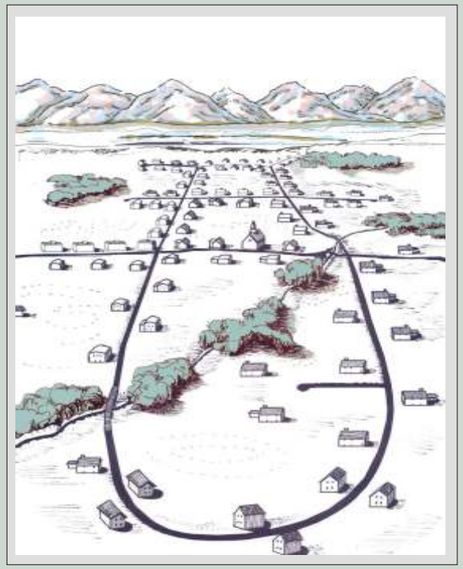
Option Two:
The developer purchases some land in a designated receiving zone and approaches the local planners. A TDR mechanism is available, and is used to negotiate new densities. The developer purchases the development rights from a designated sending zone. In exchange for leaving the sending zone in open space, the developer is allowed to increase the density in the receiving zone. Rather than one unit per five acres, the developer is allowed a higher density. The resulting design is Option Two which is approved and built.

Zoning Strategies:

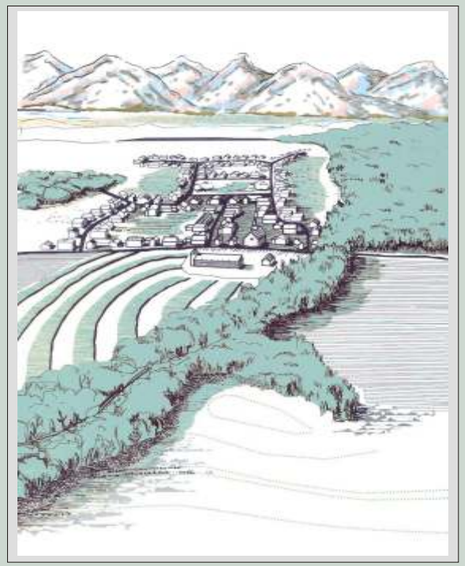
- *Cities must establish sending zones (lands to be protected) and receiving zones (lands where additional development is desired).*
- *Transfer of Development Rights can occur on land in neighboring towns and cities. Codes should allow for this community exercise to occur.*
- *Receiving zones should have a maximum density as to prevent incompatible densities from occurring.*
- *Ensure that receiving zones limit allowable density so a density increase purchase is probable. Other features such as landscaping, setbacks, and height requirements, should be revised to ensure that higher densities are plausible.*



Example:
Existing Landscape



Option One:
Traditional Development



Option Two:
Transfer Development Rights

Contributions made by:
Envision Utah, A Partnership for Quality Growth.
"Urban Planning Tools For Quality Growth"

"Saved By Development, Preserving Environmental Areas, Farmland and Historic Landmarks with Transfer of Development Rights" Rick Pruetz, AICP

Transfer Development Rights Model Ordinance

The Following is a sample ordinance that communities could adopt to implement a Transfer of Development Rights.

Agricultural TDR Program

Section 1. Intent

The primary purpose of the Transfer of Development Rights (TDR) Ordinance is to permanently preserve open land, agricultural land, sensitive natural areas, and rural community character that would be lost if the land were developed. In addition, this ordinance is intended to protect property rights by allowing landowners whose land is intended for preservation to transfer their right to develop to other areas of*(insert municipal name).* Specific objectives are as follows:

A. To effectively achieve the land use planning goals identified in the *(insert municipal name)*'s comprehensive plan while preserving existing property rights.

B. To preserve unique community features in low density residential districts while creating a more efficient land use pattern and provision of services and infrastructure in areas of the municipality proposed for growth.

Section II. Concept

The Transfer of Development Rights ordinance allows landowners in areas of *(insert municipal name)* proposed for preservation, called sending areas, to sell the right to develop their land to landowners in areas of *(insert municipal name)* proposed for additional development, called receiving areas. Transfer of Development Rights Provisions set forth below are specifically authorized under *(insert code)* of the state of *(insert state name)*, under the terms of which development rights are acknowledged to be severable and separately conveyable from a sending area to a receiving area.

When landowners in the sending area sell their rights to develop, they must deed restrict the land against any future development, although it may still be used for purposes that do not involve development, such as agriculture or forestry. When landowners in the receiving area buy the development rights from landowners in the sending area, they receive the right to build more homes on their land than they would have been allowed if they had not purchased development rights.

Section III. Sending Area Qualifications and Calculations

A. Owners of tracts which meet the following requirements may sell their development rights:

(1) The sending area tract of land shall be located in the following zoning district(s):

(Insert list of sending area zoning districts.)
(Insert other desired requirements for land to qualify as a sending area)

B. The number of development rights which may be sold shall be computed as follows:
(1) First, net developable area shall be determined by subtracting the following from gross tract area:
(a) All land restricted from future deployment by covenant, easement, or deed restriction.
(b) All land within ultimate rights-of-way of existing roads and land subject to easements or rights-of-way for railroads, power lines, and other utility lines.
(c) The number if existing dwellings units on the tract multiplied by the minimum lot size of the zoning district in which the tract is located.
(d) Land used for non-residential purposes, unless used for agriculture, parkland, or similar use. The amount of land subtracted for each non-residential use shall be at least as large as the minimum lot size of the zoning district in which the tract is located and shall be large enough to fully contain the use and all required yard setbacks for this use.
(e) All lands which lies within the 100 year floodplain boundaries, consists of alluvial soils, and/or has slopes of 15% or greater.

(2) Second, the net developable area shall be converted to square feet, multiplied by .90 and divided by...

(Insert the minimum lot size, in square feet, that existed in the sending area prior to an increase in the minimum lot size.)

This number, rounded off to the next lowest whole number, represents the number of development rights that may be sold.

(3) Instead of following step 2 above, landowners may prepare a sketch plan showing development of the net developable area, based on

(Insert the minimum lot size, in square feet, that existed in the sending area prior to an increase in the minimum lot size.)
...Lots.

The number of residential lots, excluding lots with existing dwelling units, shown in this sketch plan represents the number of development rights that may be sold, provided The Plan complies with all zoning ordinance, subdivision and land development ordinance, and other government requirements.

C. All land from which the development rights have been sold must be totally and permanently restricted from future development by a restrictive covenant which meets the following requirements:
(1) The restrictive covenant shall permanently restrict the land from future development of any non-agricultural uses, except for public parkland, conservation areas, and similar uses.
(2) The restrictive covenant shall be approved by the *(insert municipal governing body title)*, in consultation with the *(insert municipal name)* solicitor. Final plan approval will be contingent upon the developer recording the restrictive covenant at the County Recorders Office.
(3) The restrictive covenant agreement shall designate *(insert municipal name)*as the beneficiary/grantee, but shall also designate both (a) all future owners of all or a portion of the sending parcel, and (b) all future owners of any portion of the receiving parcel as having separate and independent enforcement rights with respect to the restrictive covenant.
(4) The restrictive covenant may apply to a portion of a tract of land, provided the covenant applies to at least 50% of the tract area and provided that the number of development rights sold is based on the net developable area of the portion that is restricted. Areas subject to restrictive covenants may not be used for yard setbacks or lotarea requirements of any development on portions of the tract not subject to the covenants.

Section IV. Receiving Area Qualifications and Calculations

A. Owners of tracts which meet the following requirements may use development rights that are purchased from sending area landowners:

(1) The tract of land shall be located in the following zoning districts:

(Insert list of receiving area zoning districts.)

(2) The tract shall be at least 5 gross acres in size.

B. Calculation of Potential Development in Receiving Sites

(1) Landowners in receiving districts have the right to build 1 additional dwelling unit for each development right purchased.

(2) In order to make the use of development rights feasible, the standards of the receiving zoning districts are modified as follows:

(Insert list of alternative dimensional standards for each receiving area zoning district.)

(3) The total number of additional dwelling units allowed to be built by the landowner shall be computed in accordance with the following provisions:
(a)To determine the base density if the site under existing zoning without the purchase of development rights, the landowner shall use one of the following formulas:

(i) If density standards exist in the zoning district, multiply the tract's *...(insert net, developable, or gross, depending on the municipality's method of measuring acreage.)...* Acreage by the density standard in units per acre. The resulting number, rounded off to the next lowest whole number, represents the base density of the site.

(ii) If there is no density standard in the zoning district, determine net developable area as outlined in Section III.B.1, convert the resulting area to square feet, multiply by .90 and divide the resulting product by the minimum permitted lot size, in square feet, allowed by the existing base zoning. The resulting number, rounded off to the next lowest whole number, represents the base density of the site.

(b). To determine the maximum number of dwelling units that could be built with the purchase of development rights, follow the same procedure outlined above for determining base densities, except substitute the modified density or lot size outlined in section IV.B.2 that applies to the property, based on the zoning district in which the site is located and the proposed housing type.

(c). The difference between the base density and the potential density with development rights is the maximum number of additional dwelling units that can be added with the purchase of development rights.

(d). The landowner must propose to build at least half of the number of potential additional dwelling units derived above in section IV.B.3 in addition to the full number of base density dwelling units.

(4) The applicant must purchase one development right for each additional dwelling units proposed.

Section V. Plan Submittal Process
A. Applicants shall submit a preliminary plan showing development with purchase of development rights; this plan shall meet requirements of the *(insert municipal name)*'s Subdivision and Land Development Ordinance.

B. Along with the preliminary plan, applicants shall submit;
(1) An agreement of sale for all development rights proposed to be purchased from sending area sites.

(2) A note on The Plan showing the total number of dwelling units proposed on the site.

(3) A note on The Plan showing the total number of dwelling units that could be built on the site when development rights are purchased, the number of dwelling units that can be built under the base density, and the difference between the two. This difference represents the number of additional swelling units that could be constructed on the site.

(4) A note on The Plan which shows the actual number of proposed additional dwelling units. As well as the number of development rights that must be purchased in order to build the additional units.

(5) A plan of all sending sites from which the applicant proposes to purchase development rights. This plan shall show all information needed to determine the number of development rights which may be sold, as shown in section III.B. In addition, The Plan shall be accompanied by a metes and bounds description of the property's parcel number, owner name, and block unit number.

If the applicant is purchasing development rights from a portion of a sending site, this portion shall be shown on The Plan and described with metes and bounds.

C. In order to receive a final plan approval, the applicant must agree to record restrictive covenants for all sending area land whose development rights are being used by the applicant. These restrictive covenants must meet the requirements of Section III.C., Above. The restrictive covenant on the sending area land shall be recorded first, followed by the Deed of Transfer which transfers the development rights from the sending area landowner to the receiving area landowner.

Source:
Guidebook for Creating a Municipal TDR Program
Montgomery County, Pennsylvania

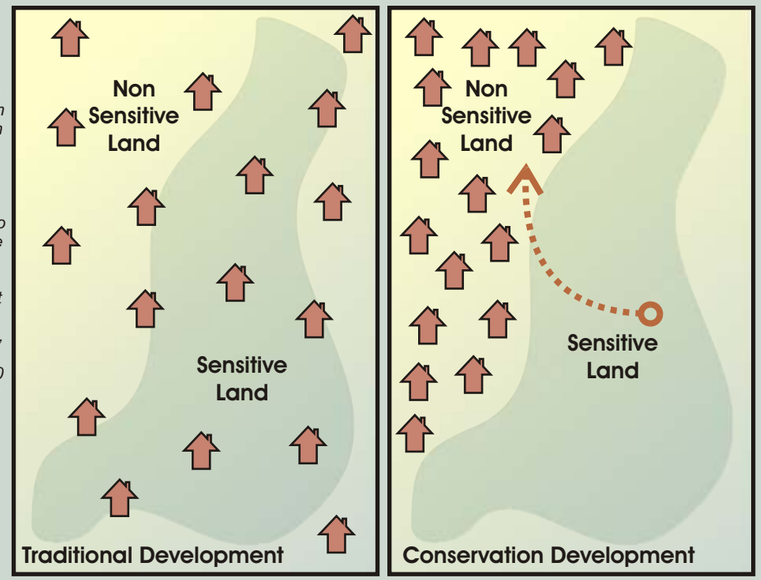
Conservation Development

Conservation development is a design strategy that can serve to preserve sensitive lands. Conservation development utilizes creative design techniques in a fairly simple development process. Basically, for any given development, if there are portions of the land that should be preserved, the number of units that would have been approved for the entire land acreage is built on smaller lots on the portion of the land that is suitable for development. The overall density of the site does not change. If 50 one-acre lots were to be allowed on a 50 acre-piece of land, and the units were designed on half acre lots, the overall density of the 50 acres remain 50 units.

Zoning Strategies Conceptual Diagram:

Conservation Development can be a useful tool for preserving sensitive lands. For this to occur, communities need to have the proper ordinances in place. Conservation development can occur in a number of different zones, as allowed by the particular zoning language.

One technique that cities can use is to set gross density requirements for the entire acreage rather than minimum lot sizes. Another technique is to encourage conservation development by allowing density bonuses for preserving open space. For example, the city would allow a 60 percent increase in density in exchange for 50 percent open space. Creative design solutions are also encouraged.



This concept sounds similar to a Transfer of Development Rights (TDR) in that density is moved from one spot to another. While density is increased on suitable land, and removed from sensitive lands, this is not a TDR Process. A TDR would be used if the entire parcel of land is deemed sensitive and un-buildable, moving development totally off the parcel, while the conservation development concept simply tries to locate development around sensitive lands on the same parcel, or group of parcels.

Since the conservation development concept is only applied to single parcels or groups of parcels, it isn't as useful on a larger scale as a TDR would be. Conservation developments cannot move development to other parts of the city or county. It can only try to move it to the best part of the site. While this is a good start for land use preservation, it is not the best way to preserve large tracts of farmland, especially if the parcels being developed are fairly small. This type of situation will result in the placement of conservation developments in patches across the county, disturbing the continuity of the land. If the existing matrix of farmland should be preserved, it is more useful to look at the land in a regional context and use other methods of land preservation.

Conservation developments work best when there is a specific portion of the land that should be preserved. Typically, conservation development is used if there are sensitive lands such as wetlands or important wildlife habitat on site. Many times, river corridors and buffers are preserved through conservation development. The remaining open space can then be used as open space for the community. While sometimes it may be necessary to discourage human use to uphold vegetation communities and habitat, many times trails and other uses are built as convenient recreational activities for residents. This offsets the smaller lot size that is usually found in a conservation development.

For these developments to work, cities must have the proper ordinances in place that describes and encourages the conservation development process. An ordinance is required that allows the conservation development process to be applied. Conservation development and creative design can be encouraged through the use of density bonuses, an allowance that should be written into the ordinance. This incentive allows a developer to sell a larger number of lots, sized smaller than typically allowed, if a portion of the land is preserved as consolidated open space. This would increase the overall density of the parcel. The land left as open space is typically held in or by a recognized land trust or the home owners association. These bonuses, while useful for large developments, don't work very efficiently for developments less than 50 acres.

Conservation Development is a tool to preserve open spaces. Whether it is farmlands or sensitive lands, conservation development can be used on a parcel by parcel, or development by development basis to help communities manage their open space needs. While this may not be the best solution to large tracts of viable farmland, it is an important tool on the local level for land preservation. It is also easily implemented on a developer by developer basis, as it does not require coordination among other entities once a zone is in place. Like any land use tool, it must be used with other tools for an overall solution to land use preservation.

Conservation Easements
Contributions made by:
Envision Utah, A Partnership for Quality Growth.
"Urban Planning Tools For Quality Growth"

Conservation Development Sample Ordinance

The following is a sample ordinance that communities could adopt to implement conservation development.

Conservation Development Ordinance
Draft Date: 3-29-01

Purpose:
The City recognizes the fundamental concept that each parcel of land is unique, and that some land is more desirable for open space, agricultural use, or natural preservation than others. At the same time, the City acknowledges that some land is not desirable for open space and that property owners expect a reasonable return on their investments. Therefore, the purpose of the Conservation Development Ordinance is threefold:

(1) To protect the natural environment, public welfare, and property values through improved stewardship of the land;

(2) To preserve public open space, wetland/upland habitats, and agricultural lands which are designated as important to preserve; and

(3)To establish and/or expand a park and trail system.

Overview
The Conservation Development Ordinance consists of a Critical Lands Map and Development Standards section. The Critical Lands Map identifies areas of the City that are important to preserve as natural open space, agriculture, or park/recreational/trai l use. The Development Standards section provides a framework for creating subdivisions and/or development plans on parcels of land that have been designated on the Critical Lands Map as having areas important to preserve.

Critical Lands Map
[Insert map here]

Development Standards
(1) Conservation Development shall occur on every parcel of land that has been designated on the Critical Lands Map as having area(s) important to preserve. The Planning Commission may exclude existing lots smaller than 1 acre at the property owners request. Conservation development may occur on parcels of land that have not been designated on the Critical Lands Map, however the City may choose to not accept this open space, and/or may require a homeowner's association to maintain it.
(2) All proposed developments on parcels of land that have been designated on the Critical Lands Map as having areas important to preserve shall submit 2 conceptual plans. One plan showing how the property could be developed under City ordinance without conservation development, and one plan showing how the property would be developed to preserve open space through conservation development techniques. Both maps would identify areas that are designated on the Critical Lands Map, with the conservation development plan showing those designated areas as protected open space. The purpose of this exercise is to demonstrate what is required for a property owner and/or developer to achieve the same financial return on a parcel of land under both scenarios. The conceptual plans could include spreadsheets, appraisals, and any other information to support this analysis.

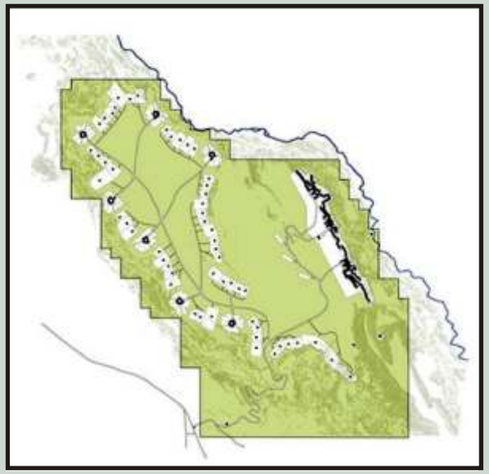
(3) The Planning Commission may recommend or require any changes to a conservation development plan as long as they do not decrease the expected financial return. In some instances where a large percentage of a parcel is covered in open space, it may be necessary for the City to allow density increased in order to make the conservation development plan fiscally comparable to the non conservation development plan. Setbacks, street widths, and other standards(not including the minimum lot sizes) shall be the same as the current zoning on the property unless the developer proposes another standard that the Planning Commission agrees is more appropriate.

Source:
Aric Jensen
Davis County Community Development

Conservation Development Example Scenario:

Scenario A: Existing zoning ordinance
No open space, 5 acre lots

Scenario B: Existing zoning ordinance
Including 30% open space & 5 acre lots



Scenario C: Conservation Development
80% open space, homes clustered on smaller lots

Creative Design Solutions

Reaching Results

What most cities fail to recognize is that current zoning codes and ordinances are not designed with the preservation of agriculture in mind. While these zoning codes and ordinances are very useful and have been around for a long time, they are simply designed to standardize development to ensure that similar land uses are found with one another. Early city planners were seeking to discourage incompatible uses. While valuable, implementation of typical zoning codes and ordinances will not preserve rural character. Early city planners were not necessarily concerned with this concept. In addition, these policies typically do little to take into account sensitive lands and give no incentives to developers for completing quality projects with consideration for local amenities and resources.

In general, to achieve results that are more consistent with an existing rural character, text needs to be included in codes and design guidelines that emphasize efficiency in proposed land use and the preservation of certain lands for existing uses. This means that current design trends should be reviewed and updated to include provisions for alternative design ideas that are responsive to the area's sensitive lands. Changes should also be included that give incentives for high design quality as well as for site amenities and sensitive lands preservation. These incentives, coupled with revised zoning, ordinances, and design guidelines, can foster design creativity, as well as improve profitability of developments while preserving the resources of the land for perpetuity. Once these guidelines are in place, it will be possible for creative design solutions to be implemented.

Creative Design:

This development was designed using some creative design solutions...

Site Layout:

-Narrow streets
-Small setbacks
-Smaller lots

Architecture & Design

-Front Porches
-Street Trees
-Building Materials

Creative design should be an essential part of new developments. This can enhance the sense of community and help in the conservation development design process.

The Process

The first step in the creative design process is to complete a simple analysis of the site. If any of the conservation methods are to be employed in a development, it is important to determine which parts of the land are suitable for development and which should remain untouched. Once it can be determined which lands are suitable for development, the type of conservation method to be used can be determined. If the site is mostly unbuildable, or the site is worth preserving due to its character, perhaps a TDR process should be used to allow the development to be transferred to another location. If there is enough land available to make development environmentally and financially feasible, perhaps a conservation development should be designed.

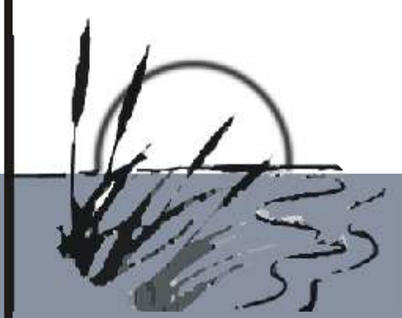
Creative design solutions work best when the final product is envisioned from the beginning of the process. For example, using the conservation development process, the planned preserved open space can be used as a design element or amenity to the final development. This is an important step. For a development like this to be successful, the open space and other natural site amenities must be integrated into the development. This can be accomplished without an increase of cost, through some creative solutions.

Site layout, drainage, architecture, and open space can be coordinated to ensure a quality final product that relates specifically to the character of the city. A number of developments have used this process in other areas of the country. Typically, the resulting development becomes a community with a distinct identity and character. By respecting the lay of the land, a more natural design can be employed that will blend the development into the landscape. In many cases, this overall approach to design reduces the cost of construction to the developer and improves the character of the development.

Final touches are what will complete the development. Of course human scale homes and yards are essential, but public spaces should include site furnishings such as benches and lighting, as well as proper landscape design to connect residential landscapes with the natural open space. Proper street design and home setbacks, as well as other design features can be encouraged by codes to increase the character of these developments. Again, it takes action on the local level to encourage developments that provide something unique to a community while allowing land owners, developers, and builders to preserve their financial interests.

Conclusions

The Davis County Shorelands Master Plan is a conceptual land use plan that suggests the types of land uses that may be appropriate in order to accommodate new growth while preserving the sensitive lands of the Great Salt Lake. The Plan suggests a number of land use concepts that should be implemented along the length of the shoreline in Davis County. These concepts, compiled from public comment, have been suggested on a countywide basis as the Lake knows no municipal boundaries.

While the Plan has been created to cover the entire shoreline of the county, it still remains the responsibility of individual municipalities to enact the appropriate tools within their communities to encourage the proper direction of growth and development. If cities choose not to act, there may not be any change in the current growth trends. There is no way to enact policies on a regional level if cities will not participate on a local level.

A countywide plan is important if the problems to be solved are larger in scale than individual cities. In the case of the Great Salt Lake, issues of ecological health must be solved on a regional basis in accordance with individual cities. No one city can implement a procedure to solve entire Lake issues, and no one plan can solve the Lake's issues without the help of each individual city. This plan is truly a model for countywide cooperation. The successful implementation of this plan will show a high level of the willingness of each municipality to work together to solve complex issues.