Of all people living in Washington County, no others have been here as long as the Shivwits Band of Paiutes. Their ancestors likely entered Utah about 1100 AD. Larger groups settled along rivers and smaller groups settled near springs. The early Paiutes were primarily hunters and gathers, but some also irrigated fields along the Santa Clara, Virgin and Muddy rivers.

The first Paiute reservation was established in 1891 on 100 acres of land along the Santa Clara River at Shivwits. In the 1950's the Utah Paiutes' tribal status was terminated, causing many problems for the people. During the 1970's payment, at 27 cents per acre, was made to the people for land that was taken away from them years earlier. On April 3, 1980, President Carter signed legislation that restored federal recognition to the Paiutes. This made it possible for the people to again have a tribal council and to receive assistance through federal social programs.

The Shivwits settlement has changed over the years and most of the early homes are gone, and new homes have been built on the east side of the old site. The historical cemetery is still in use. The Shivwits Band and the other southern Paiute remain close-knit, and their culture is important in their being a unique people.

On the south side of Ivins is a significant collection of Native American petroglyphs that likely date from about 800 AD. These petroglyphs and archeologic sites have been preserved by the establishment of the Santa Clara River Reserve, an interlocal agreement between the U.S. Bureau of Land Management, Santa Clara City, and Ivins City.

Mormon settlers originally settled the area in the mid-1800's, and thus The Church of Jesus Christ of Latter-Day Saints has been the area's predominant religious organization. The area's growth, however, has brought residents of many beliefs and philosophies, creating a blended culture fostering cooperation and united community support.

### *Cultural, Religious and Historic Policies:*

- Interface with necessary federal agencies and the Shivwits Band to plan for protection of the petroglyphs and Native American culture.
- Support and fund the Santa Clara River Reserve trails and protection. Promote the cultural arts.
- Honor the City's pioneer heritage.

## Hillsides and Geologic Hazard Areas

Many of the hillsides that frame the north and south sides of Ivins contain steep slopes which present several particularly difficult problems when subject to disturbance: rock fall, scaring, slope failure, erosion, storm water control, and vehicular access. Geological conditions of the greatest significance include the following:

- Unstable slopes on steep hillsides.
- Moderate earthquake hazard.
- High groundwater in low-lying areas resulting in instability and possible alkali staining.
- Collapsible and expansive soils that may pose a hazard to building structures.

***Hillside and Geologic Hazard Policies:***

- Where hillsides are in private ownership and development rights exist, the City will discourage development on hillsides through measures such as zoning, density transfer and acquisition/dedication. Where hillside excavation cannot be avoided, cuts are to be fully reclaimed to a natural appearance through landscaping or screened from general view.
- Public health and safety must be preserved by assuring that stability is properly maintained on any development of hillsides and/or slopes.
- In all development, problem soils must be properly identified and mitigated.
- All proposals for building sites must include a geologic/soils report addressing specific conditions of the site.
- Areas found with or known to have high groundwater shall require extensive monitoring to determine the best ways to mitigate. Any mitigation proposals shall be robust solutions to account for the unknown possibility of mitigation strategies failing.

**Storm Watercourses**

A system of dams was constructed at the base of Red Mountain beginning in the late 1970~~"~~'s to convey floodwaters around Ivins to Dry Wash and Padre Canyon Wash, with floodwater ultimately entering the Santa Clara River.

As Ivins developed in the late 1990's and 2000's, city scale storm drainage pipeline systems have been installed to provide better drainage. In 2010, curbs and gutters were installed in the historic town center area that eliminated some of the every storm problems the City was experiencing.

In 2012 Ivins City constructed a major detention and debris basin in the Padre Canyon (Tuacahn) Wash to reduce flooding problems in this wash. Then in 2016 two major detention and debris basins were installed in the Kayenta area and the original dams around the Red Mountain went under major rehabilitation to improve outlets and spillways.

Major ~~S~~storm watercourse areas subject to a 100-year flood (statistically one such flood every 100 years or in other words a 1 percent chance of such flood every year) are mapped by the Federal Emergency Management Agency. A flood prevention ordinance has also been passed that manages the policy of development in the floodplain.

*Storm Watercourse Policies:*

- The City discourages any development within known 100-year storm watercourses or flood prone areas. The exception is for development that is compatible with periodic flooding such as trail systems, golf courses and other public or private uses that will permit the free passage of floodwaters and do not involve habitable buildings nor result in significant property damage.
- The City will continue to enforce and refine when necessary, its current storm watercourse protection regulations.
- The City seeks to minimize flooding risk by:
  - Preparing and updating city-wide storm water plans for the conveyance and management of storm water.
  - Preparing a plan for regional detention structures to prevent increased peak storm flows arising from property development.
  - Increasing detention in storm water systems to decrease peak flow.
  - Protecting and expanding natural floodable areas and locating appropriate uses, such as parks in these areas.
- The City discourages the channelization of streams and encourages the preservation of natural watercourses.
- To accomplish the above, the City will prevent the development of habitable structures within a storm watercourse.
- To recognize the storm water runoff as a resource and as a potential source for other uses.
- The City proposes the following drainage policy:
  - Minimize the increase in the rate of flow from developing properties by requiring adequate detention basins unless downstream facilities exist to accommodate the increased flow rates.
  - Maintain the flow of storm runoff within its natural drainage basin and path as much as possible.
  - ~~Discourage the use of retention basins by providing adequate detention areas.~~
  - Encourage the design of drainage facilities that adequately handle storm runoff.
  - Minimize flooding nuisance in 10-year flood events with the goal of keeping all roads open and drivable.
  - Design all city underground conveyance systems for the ~~25~~10-year flood event.
  - Protect life and property in the 100-year flood event by conveying storm water using the combination of pipelines, channels and roadways and planning regional detention facilities to ensure that these facilities are not overwhelmed.
  - Drainage systems near arterial streets should be designed such that arterial streets remain open and drivable (at least one lane open in each direction) in the 100-year flood event.
  - Control peak flow discharges from the Ivins City boundary into other jurisdictions so other jurisdictions are not negatively impacted from the development of Ivins City.

## Dry Washes

Throughout Ivins, dry washes provide a natural storm drainage system carrying storm water to the Santa Clara River. This ~~natural drainage~~ system is also important as visual open spaces, wildlife habitats, and recreation corridors. The largest drainage washes are Dry Wash and Padre Canyon Wash. ~~Smaller~~ All washes ~~also~~ should be maintained in a natural state whenever possible.

When natural conditions of a dry wash are disturbed, the wash often is invaded by Tamarisk, a plant that chokes out other vegetation and impedes drainage flows, at times ~~causing~~ worsening any flooding. Tamarisk management is necessary to restore dry washes to a healthy state.

It should also be noted that dry washes left in a natural state will migrate its position over time as different sizes of floods will create new drainage patterns. When development is adjacent to a natural dry wash, consideration of this fact needs to be addressed with channel armoring.

### *Dry Wash Policies:*

- Dry Wash and Padre Canyon Wash should be preserved in a natural condition except for flood prevention, detention or water conservation.
- Wherever feasible, smaller washes shall be preserved in their natural state.
- When development occurs adjacent to natural washes that are to be preserved, armoring of the wash is necessary to ensure that a new pattern of drainage does not cause property damage.
- Tamarisks (salt cedars) should be removed from dry washes and native plants reintroduced.

## Red Cliffs Desert Reserve

Ivins is the only city in Washington County that co-signed, as a management agency, the Habitat Conservation Plan (HCP~~PC~~) for the Red Cliffs Desert Reserve. The Habitat Conservation Plan was developed by the U.S. Fish and Wildlife Service, the State of Utah, Washington County, and the municipalities affected by the Endangered Species Act of 1973. The HCP created a Desert Tortoise Preserve of 61,000 acres, including the northern edge of Ivins. The Red Cliffs Desert Reserve offers many opportunities for recreation and enjoyment of the diverse and fragile environment of Washington County.

### *Endangered Species Policies:*

- The City will support and assist in the implementation of the Habitat Conservation Plan for the Desert Tortoise as well as other legitimate threatened or endangered species in the local area.
- Land use proposals that could have adverse impacts on critical wildlife or plant habitats shall be modified to eliminate or adequately mitigate such adverse impacts.

## Air Quality

The relatively pristine air of Ivins is another of the community's great natural resources and attractiveness. Local air quality usually is excellent. The principal source of air pollution in Ivins is air