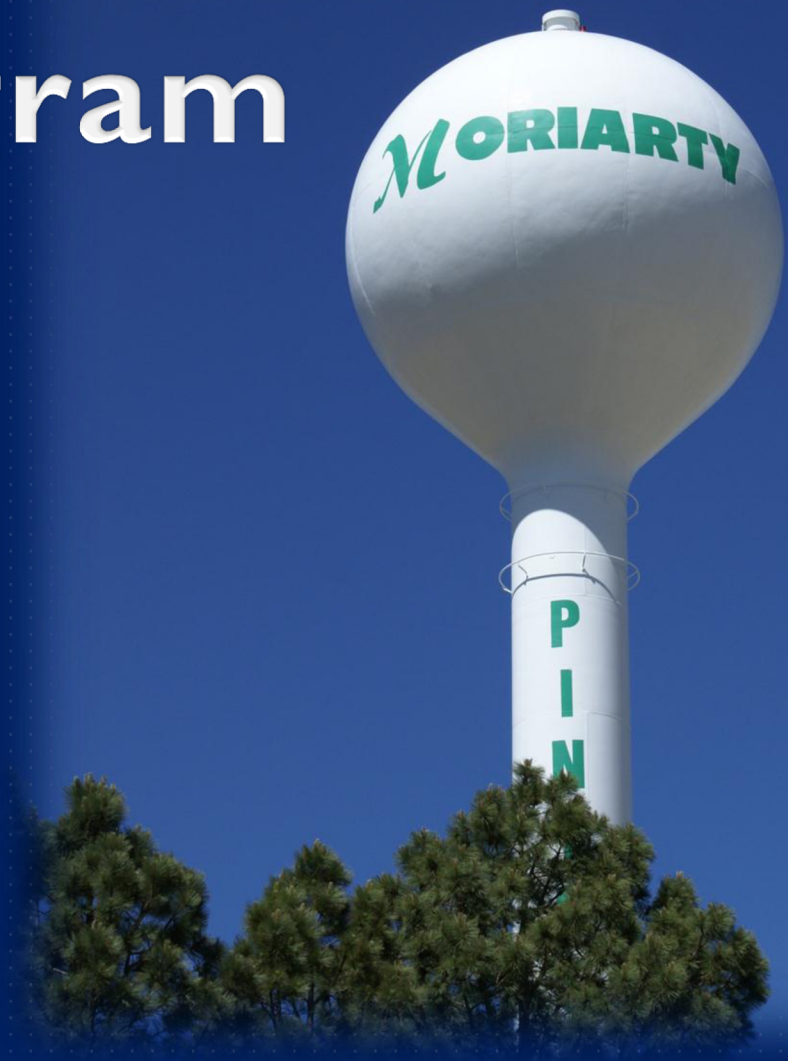
Water Conservation Program



MORIARTY
CROSSROADS OF OPPORTUNITY

MR COG

Adopted
July 25, 2012

Water Conservation Program
for the
City of Moriarty, New Mexico

Adopted by City Council
July 25, 2012

This report was prepared by the Mid-Region Council of Governments staff, and was funded in part by a grant from the New Mexico Finance Authority.

MID-REGION COUNCIL OF GOVERNMENTS OF NEW MEXICO
809 COPPER NW, ALBUQUERQUE, NEW MEXICO 87102

CITY OF MORIARTY

RESOLUTION No. 11-12-33

A RESOLUTION ADOPTING THE WATER CONSERVATION PROGRAM FOR THE CITY OF MORIARTY, NEW MEXICO.

WHEREAS, the water resources available to the City of Moriarty are limited and should be preserved and protected to the extent possible to ensure the long-term sustainability of water supply for the community; and

WHEREAS, the consequences of urbanizing growth, declining water table, vulnerability to contamination of ground water, and periodic drought conditions have an influence on the ability of the City to provide adequate and drinkable water to its citizens; and

WHEREAS, there are many water conservation techniques and best management practices that can be carried out in order to increase the efficiency of water use and encourage water consumers to reduce water consumption and waste; and

WHEREAS, the Water Conservation Program is intended to document the City's policies and procedures for implementing water conservation strategies, and is designed to meet the conservation requirement of various state and federal agencies that provide funding assistance to local governments for water programs and projects; and

WHEREAS, any future acquisition of water rights by the City will be contingent on local conservation practices and assurances that the additional water resources will be put to beneficial use in an efficient manner and will contribute to the public welfare.

NOW, THEREFORE BE IT RESOLVED that the Moriarty City Council hereby accepts and approves the Water Conservation Program for the City of Moriarty, attached and made a part of this Resolution.

PASSED, APPROVED, and ADOPTED this 25th day of July, 2012, by the Moriarty City Council.

Mayor, City of Moriarty

ATTEST:

Moriarty City Clerk

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Part I

Preparing a Water Conservation Program

This water conservation program document was prepared by the Mid-Region Council of Governments of New Mexico for the City of Moriarty as part of its comprehensive plan update. In addition to expanding the water resource section of the comprehensive plan, this water conservation program stands as a separate document to implement the water conservation policies identified in the Moriarty Comprehensive Plan.

Introduction and Purpose

The water resources of the City of Moriarty are limited. The consequences of urbanizing growth, a declining water table, increased vulnerability to the contamination of ground water, and periodic drought conditions all have an influence on the ability of the City to provide adequate and drinkable water for the community. Conserving water is crucial to the future welfare of the citizens of Moriarty. The primary purpose of this water conservation program document is to present a blueprint for encouraging the most efficient use of water and to preserve water resources available to the City of Moriarty.

There are several important objectives that provide a justification for this water conservation program. They are stated as follows:

- Ensure the long-term sustainability of water supply for the community;
- Increase the efficiency of water use;
- Prevent contamination of water supply;
- Eliminate water waste;
- Reduce per capita water consumption;
- Prepare for water shortage emergencies; and
- Preserve natural resources and local habitat.

The above objectives are appropriate for areas with limited sources of water. Any shortages or interruptions of the water supply can lead to long term consequences affecting the sustainability of water resources that support and benefit the residents and businesses of the City of Moriarty. These objectives are intended to establish a common vision, and provide certain measures for evaluating performance relating to the water conservation program.

In addition to implementing water conservation policies and procedures, this water conservation program is designed to meet the conservation requirements of various state and federal agencies who provide funding assistance to local governments for water infrastructure and other related improvement projects. Also, any future acquisition of water rights by the City will be contingent on local

conservation practices and assurances that available water resources will be used in a responsible manner.

Water Conservation Planning Process

Adopting and maintaining any local water conservation program requires a special planning process. This water conservation planning process is organized as a series of steps formulated by the staff of the Mid-Region Council of Governments and undertaken primarily by the Moriarty Municipal Public Works Department. The Public Works Department is responsible for maintaining the water infrastructure of the City. The planning process for a municipal water conservation program establishes a decision-making framework for effectively managing the use of water in the community.

A five-step planning process was developed for the Moriarty Water Conservation Program. These steps include the compilation of a sufficient water data base, water infrastructure system assessment, analysis of water use data, review of the organizational structure for water management, and development of appropriate ordinances and water conservation incentives for the residents and businesses of the community. The five steps of the water conservation planning process are described in more detail below:

Step 1: Develop a water supply information base. A water conservation program requires an effective tracking and evaluation process for all water use in the community over time. This involves recording the amount of water withdrawn from a source (i.e., ground and/or surface water) and consumed by water users. As part of the water supply and consumption data, the City is required to maintain a water quality monitoring and reporting process. In developing the water information base, the City must examine and ensure compliance with all water-related plans, ordinances, and programs adopted by the governing body as well as the water quality regulations imposed by state and federal agencies. Furthermore, the water information kept on file should include any documentation of the local history of water shortages, as well as flooding events, and the local response actions taken during that specific time period to alleviate the problem. Lastly, the information regarding existing and potential sources of the public drinking water supply should be calculated with references to current and anticipated future water rights held by the City. The New Mexico State Engineer requires a 40-year water plan to be maintained by the City.

Step 2: Assessment of water infrastructure. This step is typically included as part of an overall asset management program. Asset management programs should be an ongoing process in the maintenance and operations of the public water utility. There should be an up-to-date inventory of the water supply facilities and other system components with reference to the condition and anticipated lifespan of the various components. Water pumping capabilities, storage capacity, layout of the overall distribution and delivery systems, and dependable metering

devices are essential elements of the water infrastructure assessment and performance evaluation. Information from the water infrastructure assessment provides a basis for proposed or programmed water-related capital improvements.

Step 3: Compilation of water use data. Current and projected water demand is an ongoing process that reflects the growth and development of the community. Typically, water demand or consumption is calculated by category of user, such as residential, commercial, industrial, parks, etc. Calculations are made for the amount of water pumped and the amount of water consumed. The most significant data needed for the water conservation program is the rate of per capita consumption and the amount of water that is lost from the system (sometimes called “unaccounted-for-water”) over a specified period of time.

Step 4: Evaluate organizational structure and administration. The management and operations of the water supply system should be efficient and transparent. It is necessary to maintain accurate water accounting procedures in order to measure the performance and effectiveness of the water conservation program. This includes the effects of water conserving rate structures and a billing process that provides incentives to consumers for using water more efficiently.

Step 5: Adopt policies and implementation strategies. A comprehensive water conservation program is dependent on related policies and actions of the governing body of the City to protect and preserve the water resources available to the community. There must be established rules and regulations that are intended to reduce wasteful water use and restrict the use of water in times of water shortages or emergency situations resulting in a loss of public water supply. The policies and strategies contained in this water conservation program are intended to provide the framework and a legal basis for maintaining a sustainable water supply for the community. Included in the appendices of this water conservation program are two of the key ordinances adopted by the governing body to protect and preserve water use. They are an emergency water shortage plan and an ordinance that prohibits the blatant wasting of water in certain situations.

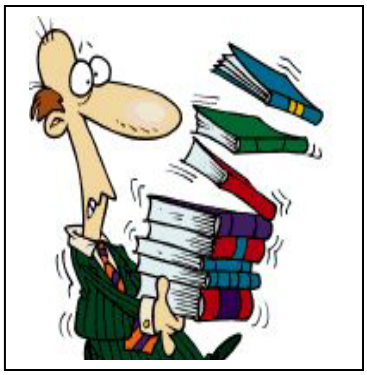
The Gazebo in Crossley Park in Moriarty

Part II

Water Conservation Program Elements

The water conservation program for the City of Moriarty is comprised of ten specific elements. These elements should be implemented to the extent that they are relevant or appropriate to the community. Some of the elements discussed below are activities that can be accomplished by individual residents acting on their own initiative; while other elements are obviously responsibilities intended for the City to carry out on a community or system wide basis.

(1) Recordkeeping and Water System Audits



It is imperative that a recordkeeping procedure be maintained for the purpose of monitoring operation and maintenance costs, revenues, and water consumption. Water system audits help to identify and assess current water uses and provide baseline data needed to document water losses, measure revenue efficiencies, and forecast future water demand. A water system auditing process should include the following contents and considerations:

- A detailed examination of where and how much water enters the distribution system, and where and how much water leaves the system.
- A water system audit should be performed on a regularly scheduled basis by the water utility staff using available information.
- The amount and status of appropriated water rights should be documented with reference to a 40-year plan for future water demand.
- A 40-year water plan addresses future water needs and identifies strategies to protect the water rights needed for the next 40 years, consistent with the goals of conservation and beneficial use of water.
- Water system audits should separate total water use by customer class, typically single-unit residential, multiple-unit residential, industrial, commercial, institutional, public landscape irrigation, and other unique types of use.
- Water system audits can determine target areas to be addressed which have the potential of saving water.
- The differences between a water supplier's monthly and annual withdrawals and its water deliveries and water billings may be interpreted as a measure for "lost water" or "non-revenue water."
- Estimating and reducing the amount of lost water is a major objective of a water system audit. Lost water includes distribution system losses through leaks, un-metered water delivered through fire hydrants, water

taken illegally from the distribution system, faulty valves or controls, faulty meters, and water used to flush sewer mains.
- Water system audits can provide a history of data to be used as a basis for water demand trends and projections calculated with or without conservation measures in place.

(2) Monitoring and Measuring

Metering is an essential element of any water conservation initiative. Without water meters, individual users cannot tell how much water they are using, or how much they are saving. By installing water meters and basing water bills on actual water use, a utility can create a strong "dollars and cents" incentive for consumers to use less water. Metering is an equitable means of billing for water use, and water conserving customers benefit directly.

Metering can be implemented through a resolution, regulation, or ordinance that requires the installation and reading at regular intervals of meters at all sources. Lack of accurate metering undermines control of water losses, costing and pricing, and other conservation measures. The water metering system should be evaluated using the following criteria:

- All residential (single and multiple dwelling units), commercial, institutional, and industrial service connections and/or self supplied public buildings, golf courses, athletic fields, parks, cemeteries and construction projects should be metered and monitored by the City.
- Metering allows water utilities to track water production and delivery, identify locations of leaks in the distribution system, and manage demand through pricing.
- Meters should be appropriately sized to the customer's level of use. Meters that are too large, tend to under-register water use.
- All water provided free of charge for public use should be metered and recorded at regular intervals to allow the water utility to accurately account for water use.
- The water provider should establish an organizational unit within the water utility that will provide a continuous program for water meter testing, repair, and replacement.
- Water meters can be damaged and deteriorate with age, producing inaccurate readings which give misleading information on water usage, make leak detection difficult, and result in lost revenue.
- Meters in service for 10 years should be tested on a regular basis to ensure accurate accounting and billing.

- Private property owners should be encouraged to do an in-depth evaluation of their on-site plumbing system from the meter hook-up and throughout the property to detect any faulty meters, hook-ups, or leaks in the property plumbing system.

(3) Water Pricing

Because of ever increasing water demands in a growing community, and limited water resources, a tiered system or block rate structure should be considered. The idea behind conservation-based pricing is to charge customers for the full cost of water services in order to reflect the true costs of producing it, while encouraging water users to reduce their overall water consumption through incentives as well as disincentives.

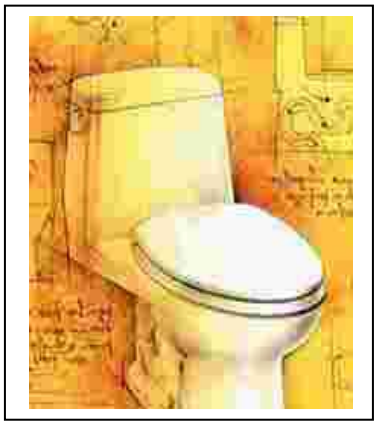
The structure basically sets up a "water budget" with an allotment to the water users based on water availability, historical use, and demographics of the water service area. Ideally, the allotment applies individual standards to each customer account including number of persons per household, size of lot, and application of a per capita per day use amount to determine a maximum required usage. Standards for non-residential water customers are based on other factors appropriate to the category of use.

When the customer water usage exceeds their water budget, they fall into the next more expensive tier and are charged accordingly. All customers receive the established amount of water they need at the lower base rate. This approach gives water users more options and personal choice. Rather than mandating how customers use the water and regulating or banning a specific use, the water budget technique leaves the decision in the hands of the rate paying customer. Other considerations that apply to conservation rate structuring are as follows:

- Water rates should be designed to recover all costs including construction of water supply facilities, heavy equipment, personnel, training, operation and maintenance, water quality testing, depreciation, interest on debt or capital outlay, and taxes; and should establish a reserve fund for future improvements, expansion and replacement of worn out system components.
- A water allocation method establishes escalating allocation/pricing tiers so that each unit of water in excess of the predetermined base quantity, costs more than the previous unit.
- Water utilities can minimize impact on low income populations by establishing "lifeline" rates set at a lower price for the first block or tier of water use.

- Customers with high usage assume the responsibility for paying the costs they impose on the water system.
- When wastewater costs are recovered through a commodity charge on water use, this adds an additional charge on water use that needs to be incorporated into the pricing. If conservation reduces inflows into water treatment plants, the variable costs (energy and chemicals) associated with wastewater treatment will decrease. Thus utilities that operate both water and wastewater facilities need to look at the change in variable costs of both when considering changes in price of water. Reduced flows to the wastewater facilities as a result of conservation measures can improve wastewater utility performance by reducing overflow events, incidence of wastewater plant bypasses, and the number of clarifier-washout events.
- Increasing block rate structures often have either different rates or different usage blocks for the various customer classes. By establishing rates or usage blocks by customer class, a utility does not target large water users but rather targets water users in each customer class who use excessive amounts of water, with excessive usage often tied to some type of peaking behavior.
- Price per block can be set to increase during peak use periods. Usually, peak use covers the summer months, but the designation can be applied to other periods in which pronounced peaking is evident. The rationale for seasonal rate structures is the higher cost of producing additional water under peak conditions. Seasonal rates that target peak usage in especially dry or hot weather may actually enhance revenue stability over the longer term by shaving usage peaks. Also, by targeting peak usage rather than average usage, the utility is not reducing its revenue base in an average usage year as much as it is reducing excess revenues that occur in unseasonably hot and dry years.

(4) Low Flow Plumbing Fixtures



The National Energy Policy Act of 1992 (NEPA) sets the standard for all toilets manufactured after January 1, 1994, for residential units, to use no more than 1.6 gallons per flush. NEPA requires that the maximum flow rate of showerheads shall not exceed 2.5 gpm (gallons per minute). NEPA also requires kitchen and bathroom faucets not to exceed 2.5 gpm, and 2.0 gpm faucets for bathroom sinks. Aerators can be installed on older faucets. Water saving, energy efficient clothes washers, dishwashers and hot water heaters are available.

Many states have regulations requiring low water use fixtures in all new construction including commercial construction. Remodeling permits can be conditional on replacing water wasting fixtures with the new. Many cities are using voluntary rebate programs in the form of credits off customer's water bills when low flow toilets, showerheads, or water saver appliances are retro-fitted. There have also been free give-a-ways in the form of showerheads, aerators, and toilets. These programs and the amount of rebate or give-a-way vary with available funding sources. Indoor water use often accounts for a large percentage of annual water demand.

The immediate decrease in water usage when homes are equipped with the new technology is significant. Some of the benefits of low water use plumbing, appliances, and fixtures are as follows:

- Ultra-low-flush toilets conserve up to four gallons of water per flush saving approximately 4,900 gallons per year for a typical two-person household. Low-flow showerheads and faucets can reduce the flow of water by 50 percent and result in thousands of gallons of water being saved in each residence or business.
- Ordinances or plumbing codes for new commercial, industrial and all public buildings could require the use of low-flow toilets, and spring-loaded faucets that close when not in use or faucets equipped with metering valves that automatically close after delivering a maximum of ¼ gallon. In addition to the ultra-low-flow toilets, public urinals should be required that use only one gallon per flush and should not use timing devices to periodically flush the system regardless of demand. There are now waterless urinals on the market for commercial or institutional buildings.
- Modern energy and water efficient clothes washers use approximately 25 gallons per full load versus the average 40-50 gallons for older non efficient washers.
- Energy efficient dishwashers use substantially less than the average 15 gallons per wash of the older machines.

(5) Xeriscaping

Arid-climate communities should implement landscape design ordinances, audits, retrofits, and incentive programs for residential, commercial, institutional, and industrial development sites to encourage drought-resistant and low-water-use landscapes and efficient irrigation systems.

A landscape rebate program, for example, provides an incentive to the property owner for converting high-water use to low-water-use landscaping by providing compensation in the form of a one-time payment or credit to the property owner. Also, modern and efficient watering equipment and accessories are readily

available; and their use should be encouraged. Some of the considerations and techniques for improving water use efficiency in landscaping are listed below:

- Xeriscaping a property can reduce outdoor water usage 50% or more.
- Using well-designed Xeriscape principles minimizes or deletes areas of irrigated water-hungry turf grasses and utilizes native plants selected for their water efficiency and drought tolerance. Rebates are commonly use for xeriscape conversion and turf grass removal.
- Low-water-use trees, shrubs, flowers and groundcovers are grouped in the landscape according to their different water needs so they can be irrigated separately and efficiently. This is sometimes referred to as a landscaping zone system.
- A well-planned Xeriscape can increase the owner's satisfaction with the property, increase the value of the property, and reduce on-site water use.
- Drip and subsurface irrigation systems are most effective with low water use plants in the landscape.
- Xeriscaping produces maximum benefit when combined with water harvesting systems and the application of graywater.
- Ordinances for new construction can limit high water use landscaping with no loss in aesthetics or property values.
- Landscape design requirements are most effective when accompanied by a design review service offered through the local government, planning office, or the local water utility.
- A landscape design review service can help subdividers and homeowners develop landscaping plans that are consistent with community water conservation plans.

(6) Regulating Outdoor Watering

Ordinances may restrict the use of the public water system by mandating government and public compliance to seasonal watering schedules and implementing time-of-day watering periods or "odd/even" watering days during set hours. Water harvesting and graywater systems can be encouraged or mandated to supplement or replace the use of potable water for outdoor use. Some examples of outdoor watering restrictions include:

- Regulations may be adopted to prohibit spray irrigation watering of properties during certain times; typically restrictions are applied during the months from April through October between 11:00 a.m. and 7:00 p.m. in this region of the country. Spray irrigation can result in a significant water loss due to wind and evaporation. Such restrictions typically do not apply to drip irrigation, bubblers, hand watering, or containerized plants and plant stock.

- Regulations may require all even numbered (address) properties to be watered only on even numbered dates, and all odd numbered properties to be watered only on odd numbered dates.
- Water providers may initiate efficient irrigation system retrofit programs offering rebates or credits for replacement of old or inefficient irrigation systems with approved modern water-efficient systems.
- Water providers may initiate surveys and audits on existing properties for sprinkler efficiency and development of an appropriate irrigation schedule.
- Xeriscaping techniques can be successfully encouraged to reduce outdoor water usage 50% or more.
- Water providers can encourage water harvesting techniques throughout the water service area to reduce the use of potable water for outdoor landscaping by capturing rain water and directing runoff to plants.
- The New Mexico Graywater Statute allows homeowners to use up to 250 gallons of graywater per day without a permit, if certain conditions are met, for outdoor watering.
- A graywater system can be as simple as collecting shower water in a bucket, to full double piping of the plumbing system at the appropriate graywater producing sources, and storage in a tank or cistern for later use.

(7) Water Harvesting

Water harvesting is the process of intercepting or capturing storm water runoff from a surface (e.g., roof, parking area, land surface) and putting it to beneficial use. Generally, homeowners are allowed to retain direct precipitation for use on their property. Usually, rainwater is harvested and stored for watering landscape plants during a dry period. Rainwater runoff can also be directed immediately into catchment basins containing vegetation. Some of the benefits of stormwater harvesting are:

- Intercepted rain water can be collected, detained, slowed down, and routed through the site landscape using micro basins, grading, swales, and other water harvesting structures.
- A 1,000 square foot roof can yield over 420 gallons of water from 1 inch of rain.
- Rain water harvesting can be incorporated into large-scale landscapes, such as parks, schools, commercial sites, parking lots, and apartment complexes, as well as small residential landscapes.
- Rain water harvesting conserves energy. Every gallon collected for irrigation reduces a like amount of potable municipal or well water pumped, treated, and piped to consumers.

- Rain water is the best source for plants as it is generally free of salts and other minerals. However, contaminants from building materials can be picked up by rooftop-harvested water which can be harmful to root growth.
- Rain water harvesting can reduce soil erosion caused by high volume storm water runoff.
- Harvesting rain water can be as simple as putting a barrel under a gutter downspout, or as complex as using underground or above ground cisterns with pumps or gravity-flow distribution systems.
- Rain water harvesting produces the most benefit when combined with the water wise principles of Xeriscaping.
- Governments can require these techniques through new housing construction ordinances or landscape guidelines.

(8) Graywater Use

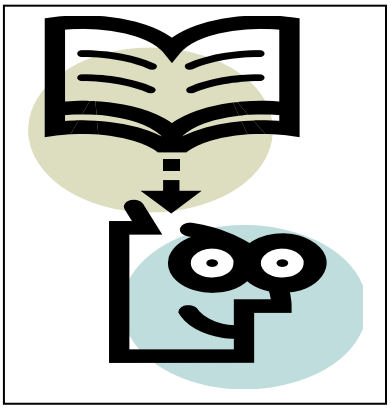
"Graywater" is defined in the New Mexico State Statutes as ". . . untreated household wastewater that has not come in contact with toilet waste and includes wastewater from bathtubs, showers, washbasins, clothes washing machines and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers or laundry water from the washing of material soiled with human excreta, such as diapers." [74-6-2A. NMSA 1978]

The New Mexico Environment Department or the New Mexico State University Cooperative Extension Service can provide information and assistance to property owners desiring to install a graywater system. A graywater system is a "water re-use" technique that results in a more efficient utilization of water. Certain factors should be considered when developing a graywater system:

- Roughly 50% of our daily water use in the summer is used outdoors, mostly for irrigation of landscapes. Using potable water, treated to drinking water standards, is not necessary for landscape watering.
- An average household can generate 20-40 gallons of graywater per person per day, or about 10,000 gallons of graywater per year.
- Graywater can help drought proof your landscape since more than half of the water used indoors can be re-used as irrigation water during shortages, when outdoor watering may be restricted.
- Graywater often contains phosphates and other compounds which can provide nutrients to your plants. However, graywater may also contain chemicals and other constituents (even medications) that may be harmful to plants or animals. It is therefore important to know and control what is put down the drains which contribute to the graywater system.
- New construction can be double-piped at minimal expense producing maximum benefit from collecting graywater.

- The New Mexico Legislature during the 2003 session passed a bill allowing for the use of up to 250 gallons per day of residential graywater for household gardening, composting or landscaping without a permit, if specific requirements are met. Regulations include the following:
    - No NMED permit for discharge less than 250 gallons per day.
    - Wastewater discharge permit required from NMED for discharge of more than 250 gallons per day.
    - Graywater cannot be used on vegetable gardens where water comes in direct contact with food produce (orchards, however, are okay).
    - Overflow must drain into standard liquid waste system.
    - Storage of graywater must be covered and cannot be held more than 24 hours.
    - Vertical separation of at least five feet between graywater point of discharge and ground water (top of water table).
    - Graywater systems should not be located in a flood prone area or unlined flood conveyance channels.
    - Graywater piping should be clearly labeled.
    - Graywater should be applied on site (no runoff), not sprayed, and not ponded on the land surface or discharged to surface water.
    - Contact with people or domestic pets should be minimized.
- With the New Mexico Graywater Statute in effect, local governments may not need to adopt graywater ordinances unless they perceive a need for a broader application of graywater or more stringent requirements to serve the best interests of the community.

(9) Public Education and Outreach



Educational and informational materials should be directed to the water-using public to explain the conservation program and provide tips on how to conserve water. Citizens need to understand what the water supply situation is in their community, why they need to save water, and how to do so. A standard public information package can be prepared, identifying the water conservation program methods for reducing water use. Some suggestions and considerations for conducting a public information program are:

- Any public information campaign plays an important role whether the water conservation measures being requested are voluntary or mandatory.
- A well-planned public information program will not only increase the public's awareness about the need to conserve water and tell customers

how to do it, but it will also provide a positive public relations benefit for the utility.

- The water utility should assess the conservation information needs of the community and identify the types of communication methods that work most effectively in the local service area.
- General information should be provided to the entire community and more specific information to targeted customer classes.
- A water conservation program should address the specific characteristics of the community; what may be appropriate for one community may not work in another.
- Public advertising campaigns should remind water customers of the consequences of drought or other water shortages and what they must do to use water more efficiently.
- The local news media should provide daily updated status on outdoor watering recommendations based on weather conditions.
- Local websites can be effective in providing water conservation topics such as xeriscaping plans or tips, repairing leaky faucets, turning off water during tooth brushing or shaving, shorter showers, and other common sense steps.
- The water utility should design water bills that show charts with the current month's water usage, the previous month's usage, and year ago usage.
- Water bills could include timely printed inserts with water conservation goals, water conservation tips, pertinent updates, and any new restrictions or programs which may affect the customer.

(10) Emergency Water Shortage Plan

A number of scenarios can be envisioned for water shortages in a community. There may be a sudden increase in demand like when large volumes of water are pumped for firefighting purposes; or a reduction of accessible water at the pump due to a rapidly declining water table. A mechanical system breakdown can occur in which pumps, storage facilities, or distribution pipes are compromised and not fully functional. A pollution event may take place in which the water supply is contaminated and no longer suitable for human consumption. And, more insidiously, prolonged drought conditions persist; eventually disrupting normal civic functions and activities.

The response to a sudden water system loss should be activated by an official declaration of the Chief Administrator, the Mayor, or the Governing Body of the municipality. Typically there are three or more levels of action designated for the purpose of defining emergency actions relevant to the severity and significance

of the water shortage. Water shortage emergency actions are usually triggered by specific conditions which are measureable, such as water system breakdowns and leaks, declining ground water levels, reservoir storage levels, operational indicators (i.e., storage tank recovery, pumping capacity, well pumping capabilities), uncertain water supply availability, etc. Emergency actions are intended to reduce water consumption immediately and until such time as the water shortage is resolved. Water shortages may last for several days, or remain as an extended condition for months or even years.

Water emergency situations can also be triggered by significant periods of drought. Drought is a periodic condition in semiarid New Mexico, which is defined as an extended period of below-normal rainfall often accompanied by higher than average local temperatures. An extended period of drought can have a destructive impact on communities if they have not prepared for periods of low water availability. The combination of dry weather and high temperatures can seriously reduce the soil moisture content and increase both evaporation and evapotranspiration from plants, requiring an increase in irrigation of landscaping, gardens, and farmlands.

Emergency water shortage plans and drought contingency strategies are an integral part of water conservation programs; and typically contain emergency action procedures, water resource information, water use restrictions, public information, and special decision-making authority during times of crisis.

Xeriscaping at Moriarty High School

Part III

Conservation Program Strategies

This Water Conservation Program provides an agenda for the City of Moriarty to preserve the available water resources of the community and to ensure a sustainable supply of water for long term growth and development. Because of the known limitations of the water resources in the Estancia Basin, which is the primary water source for the City, conservation is vital to the future of the citizens of Moriarty.

Conservation and Management

There is no single remedy to produce significant water savings or guarantee a sustainable water supply for the City of Moriarty. In order to improve the efficiency of local water management, a comprehensive approach and multiple actions are needed. This applies to water conservation as well. Conservation has to be a concerted effort by individuals as well as the community at large. The role of the City government is to lead by example, regulate water use as necessary, and promote wise use of water by everyone in the community.

The general intent of this water conservation program is to minimize the per capita use and other water consumption in the community, preserve and protect the water supply source, minimize water system losses and wasted water, and prepare for water shortage emergencies. The ground water withdrawn from the aquifer underlying the City of Moriarty should be used in the most resourceful manner to maintain a safe and secure water supply for the City. The public water supply is treated to drinking water (potable) standards, making it a valuable commodity in the community. Although water resources are used for many different purposes, water consumers should reflect on the necessity of using such high quality water for anything other than human consumption.

The water conservation planning process as described in Part I of this document establishes a combination of continuous data collection and monitoring of the City's water system. With reference to a statistical baseline, data and information compiled by the water utility throughout the continuous planning process can provide a basis for measuring the success of various conservation efforts undertaken by the community. Governmental policies, plans, and regulatory ordinances are appropriate and necessary to carry out the water conservation program; and should be reviewed and revised to include or make reference to water conservation objectives or principles.

The ten basic elements of the water conservation program establish a framework of conservation activities that should be implemented and promoted by the City. These elements should be readily understood among the residents, businesses, and other water users throughout the City of Moriarty. A simplified matrix of the

water conservation program has been developed to track the progress and most current status of the program elements. The matrix is provided in **APPENDIX A** of this document and should be reviewed and updated annually. This matrix can be referenced in discussions with the general public and in the identification of priorities for implementing water conservation measures.

In Moriarty, water is a valuable but limited natural resource which should be used wisely and efficiently. Wasted water is lost water. Consequently, there is a need to impose restrictions and penalties for wasted water in order to preserve the community's water supply. A water waste ordinance is a common means of reducing or eliminating the unnecessary waste of water in communities that have such limited water supply. A draft ordinance prohibiting water waste in the City of Moriarty is shown in **APPENDIX B** of this water conservation program. Water waste is prohibited by this ordinance as a condition of receiving water service. Usually a determination is made by the governing body that wasted water unnecessarily depletes the water supply, causes soil erosion and degrades streets, and is detrimental to the public health and safety.

Emergency Contingency Planning

Contingency planning is a systematic approach to identify specific actions to make certain that proper and immediate steps will be undertaken by the governing body to minimize damage or injury to the community caused by a significant or catastrophic event. Contingency planning for water emergencies is designed to anticipate and prepare for the eventuality of a water shortage or loss that can be immediate or long term in duration. In most cases, a sudden loss of water is the result of an infrastructure breakdown which interrupts the water supply system.

Contingency planning for a drought is conducted as an adaptation planning process in response to an impending water shortage which is usually prolonged and regional is scale. Furthermore, it is difficult to anticipate the timing and extent of the drought conditions which can have a serious impact on the community water supply. The water use restrictions identified in an emergency water shortage plan would be applicable in a drought contingency plan as well.

In the City of Moriarty, an ordinance adopted by the governing body defines three water emergency stages which are triggered by an "impending shortage of water" that is estimated to occur within the duration of a specified period of time in the immediate future. The estimated water shortage is determined by the governing body with the advice of City staff. The water emergency stages are as follows: Stage 1-Advisory, Stage 2-Alert, and Stage 3-Emergency. As a consequence of the emergency declaration, water use restrictions are prescribed, or mandated in most cases, for the citizens of the community to cut back on water use. Penalties may be imposed for violations of the water use regulations.

The Emergency Water Shortage ordinance developed for the City of Moriarty is presented in **APPENDIX C** of this document. The purpose of this ordinance is to provide a means for the governing body to implement measures to manage water use in response to emergencies or unexpected events that may disrupt or endanger the City's water supply.

Water Conservation Strategies

After a general assessment of the water conservation policies and practices in Moriarty, and based on research pertaining to water conservation programs in other communities, the following strategies are recommended for consideration and implementation by the governing body:

- The City should review and evaluate all regulatory ordinances to identify opportunities for incorporating policies and criteria for water efficiencies and conservation practices; and revise or update accordingly. Primary ordinances subject to review are as follows:
  - the zoning ordinance can be revised to prescribe drought tolerant vegetation and low water use landscaping with irrigation systems designed using xeriscape principles.
  - the subdivision ordinance can be amended to include more detailed guidelines on drainage plans that provide for on-site retention of storm water to benefit landscaping; and attention to "low-impact development" which is an engineering design concept for managing storm water runoff while preserving the natural features of the site.

- The City should investigate the possibility of instituting local building codes requiring low water use plumbing fixtures and appliances in all new residential construction and remodeling.

- The City should initiate a water system auditing process to improve water accounting methods and data gathering. Of importance to the New Mexico Office of the State Engineer is to establish a baseline for a local water use profile, standardize the calculation of per capita water use on a regular reporting schedule, and utilize effective tracking and evaluation procedures.

- For purposes of responding to water shortages or drought situations, the community water system should be evaluated in terms of:
  - maximum water supply, alternative supply, and additional supply,
  - peak demands by category of user,
  - status and conditions of water service areas,
  - leak detection and prevention,
  - storage and recovery capability, and
  - operational requirements of treatment facilities.

- The high water loss percentage in the water delivery system indicates the need for a more aggressive leak detection program and subsequently, more funding for water infrastructure repair and other capital improvements to reduce system losses.

- The City should have a water rate structure analysis performed by a qualified contractor with expertise in determining the most effective rates for the water users in Moriarty, based on the principles of water conservation and the true value of water.

- The City should conduct a program for replacing older or high water-using fixtures and toilets in all public buildings.

- Water billing statements and the official city website should be used to educate the public with tips on how to conserve water, while providing information on individual water use in comparison with average water use in the community. Information should explain City water policies, instructions for leak repair, and facts about water uses in the community.

- A drought contingency strategy is based on official weather and climate data typically provided by government agencies:
  - The City should track the regional weather conditions which are continuously monitored on a national scale. The U. S. Drought Monitor is released weekly by the National Drought Mitigation Center and classifies drought conditions by intensity: Abnormally Dry, Moderate Drought, Severe Drought, Extreme Drought, and Exceptional Drought. The website for the Drought Monitor is as follows: http://droughtmonitor.unl.edu/DM_state.htm?NM,W
  - Local details regarding drought conditions are also available at the state level. The New Mexico Drought Task Force is activated as necessary to initiate statewide drought strategies. The website for New Mexico DroughtWatch is: http://nm.water.usgs.gov/drought/

- The City needs to expand its efforts to increase public awareness and to conduct education programs that promote:
  - water conservation, individual on-site water harvesting, utilization of gray water, and application of xeriscape principles citywide.

APPENDIX A

Water Conservation Program Matrix

WATER CONSERVATION MATRIX

Summary of Conservation and Drought Management Plans, Regulations and Programs

For the Municipality of Moriarty **Date of Review May 2012**

Type of Measure	General Overview and Status	References
(1) Water Utility Recordkeeping and Water Audits	Pumping records, customer billings, and return flow data for the wastewater treatment plant are maintained on a monthly basis. All records are compiled on spreadsheets for analysis. The per capita consumption rates are not calculated on a routine basis.	Public Works Dept.
(2) Water System Monitoring, Metering, and Measurement	All water users are metered, either individual or group accounts. Defective meters are replaced as needed. Water lost through the system may be as high as 25 percent for a variety of reasons. The unaccounted-for-water (lost water) should be well under 10 percent.	Public Works Dept.
(3) Conservation Rate Structuring and Water Pricing Incentives	Current rate structure consists of a base fee for the first 4,000 gallons used, with gradually increasing block rates for both residential and commercial connections. There are no limits, no surcharges, and no penalties for heavy water usage.	Ordinance O-2004-01
(4) Low Water Use Appliances, and Fixtures	No municipal ordinances were found pertaining to water conserving fixtures or appliances. National and state plumbing codes require low water use fixtures but apply to individual property owners. Energy Star rated appliances are available on the commercial market.	
(5) Low Water Landscaping, Irrigation, and Xeriscaping	No specific requirements imposed by ordinances, but water conservation is encouraged in the subdivision regulations.	Ordinance O-2006-09
(6) Outdoor Watering and Water Waste Restrictions	Water use regulations are present in the Water Conservation Ordinance. Regulations also provided in Article 3 (Water Conservation Plan) as part of the Water and Sewer Regulatory Ordinance (O-2004-01, revised)	Ordinance O-2004-01; Ordinance O-2011-10
(7) Rainwater Harvesting Programs	None documented. Although grading and drainage plans are required by the subdivision regulations, there are no criteria for on-site storm water retention or rainwater harvesting.	Ordinance O-2006-09

Type of Measure	General Overview and Status	References
(8) Water Reuse Regulations and Graywater Systems	Gray water effluent from the sewage treatment plant is diverted to the irrigation system for the outdoor recreation fields located near the treatment plant. There is no public information program to encourage graywater use by individuals.	Component of the City's wastewater treatment infrastructure.
(9) Public Information and Education Programs	None documented. Informally encouraged.	
(10) Contingency Plans for Water Shortage Emergencies and Drought	The Moriarty Water Conservation Ordinance adopted on December 14, 2011, contains procedures for declaring a water emergency; and includes water conservation measures and water use restrictions to avoid the effects of drought in the City. Two new ordinances are under review regarding an emergency water shortage plan and prohibiting the waste of water.	Parts 3, 4, 6, and 7 of Ordinance O-2011-10

APPENDIX B

Water Waste Ordinance

ORDINANCE No. _____

AN ORDINANCE PROHIBITING WATER WASTE IN THE CITY OF MORIARTY; AND PROVIDING FOR THE ADMINISTRATION AND ENFORCEMENT OF WATER WASTE RESTRICTIONS.

NOW THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF MORIARTY, NEW MEXICO.

PART 1. STATEMENT OF POLICY

A. The Governing Body has determined that wasted water unnecessarily depletes the water supply of the community, results in the loss of a valuable natural resource, causes soil erosion and degrades streets, and may create public safety hazards.

B. Water waste is prohibited as a condition of receiving service from the municipal water utility. Water waste within the municipal limits is prohibited even if the water is not provided by the municipal water utility.

PART 2. AUTHORIZATION

The Mayor, or the Mayor's designee, shall be responsible for the enforcement of this Ordinance. The Governing Body shall prescribe the policies, rules, and regulations to carry out the intent and purposes of this Ordinance.

PART 3. DEFINITIONS

A. DRIP IRRIGATION means low pressure, low volume irrigation applied slowly, near or at ground level.

B. FUGITIVE WATER means water that has escaped from one property onto adjacent property or the public right-of-way. Fugitive water shall not include:

1. Storm water runoff;

2. Flow of water resulting from temporary water supply system failures or malfunctions;

3. Water applied to prevent or abate health, safety, or accident hazards when alternate methods are not available. The washing of outdoor eating areas and sidewalks is not included in this exemption;

4. Flow of water resulting from vandalism, weather conditions, or emergencies; and

5. The occurrence of an unforeseeable or unpreventable failure or malfunction of plumbing or irrigation system hardware.

C. GRAYWATER means untreated household wastewater that has not come in contact with toilet waste. Graywater also does not include water from kitchen sinks or dishwashers.

D. HARVESTED WATER means storm water that is intercepted or captured for beneficial use. Harvested water may be stored on-site and used for landscape watering during dry periods.

E. PUBLIC RIGHT-OF-WAY means dedicated public land for the use of the public for the movement of people, goods, vehicles, or storm water. For purposes of this Ordinance, public right-of-way shall include curbs, streets, and storm water drainage structures.

F. RESPONSIBLE PARTY means the owner, manager, supervisor, or person who receives the water bill, or person in charge of the property, facility, or operation during the period of time the violation is observed.

G. SHUT-OFF NOZZLE means a devise attached to the end of a hose that completely shuts off the flow of water when left unattended.

H. SPRAY IRRIGATION means the application of water to landscaping by means of a device that projects water through the air in the form of small particles or droplets.

I. SUB-SURFACE IRRIGATION means low pressure, low volume irrigation applied slowly, below ground level.

J. WATER WASTE means any water, other than natural precipitation, that flows from a property to the public right-of-way or adjacent private property. Water waste is a non-beneficial use of water. Non-beneficial uses include but are not restricted to:

1. Landscape water applied in such a manner that it regularly overflows the landscaped area being watered and runs onto adjacent property or public right-of-way;

2. Landscape water which leaves a sprinkler, sprinkler system, or other application device in such a manner as to spray onto adjacent property or public right-of-way; and

3. Washing of vehicles, equipment, or hard surfaces such as parking lots or driveways when water is applied without shut-off nozzles and in sufficient quantity to result in excessive flow onto an adjacent property or the public right-of-way.

PART 4. WATER WASTE RESTRICTIONS

A. No person, firm, corporation, or government facility or operation shall cause, or permit to occur, any water waste or the flow of fugitive water onto adjacent properties or public right-of-way whether served by the municipal water utility or by a private well.

B. The following restrictions apply to all properties that use spray irrigation within the municipal limits or are served by the municipal water utility:

1. Beginning April 1 through October 31, spray irrigation is allowed only from 6:00 p.m. to 11:00 a.m. on all properties.

2. Shut-off nozzles are required on any hoses used for hand watering, vehicle or equipment washing, or other outdoor uses.

3. Additional scheduling or restrictions may be applied during declared drought or emergency events.

C. The water waste restrictions do not apply to the following:

1. Outdoor watering performed with permanent drip irrigation system, sub-surface irrigation, harvested water, or graywater.

2. Watering of containerized plants and nursery plant stock.

3. Repair and maintenance of irrigation or water supply systems.

4. Water applied to abate spills of flammable or otherwise hazardous materials.

5. Water used for firefighting purposes, including the inspection and pressure testing of fire hydrants, or the use of water for firefighting training activities.

6. Water applied as a dust control or soil compaction measure as may be required by regulations of work practice. Reclaimed waste water shall be used when available and appropriate.

7. Water used for street sweeping, sewer maintenance or other established utility practices.

8. Temporary malfunctions or vandalism to the water supply system.

9. Non-profit car washes held as fund raisers, if vehicles are washed using hand held buckets and hoses equipped with shut-off nozzles.

PART 5. VIOLATIONS AND PENALTY FEES

A. Any responsible party who violates any of the provisions of this Ordinance shall be subject to progressively higher penalty fees until the violation ceases, an extension of time for corrective measures is granted, or an appeal is initiated in accordance with the provisions of this Ordinance.

B. Upon discovery of a violation of this Ordinance, a verbal warning and placement of a door tag shall initiate a series of inspections by the City to correct the violation. The responsible party must correct the violation, or may request an extension of time to take corrective measures, or may initiate an appeal in accordance with this Ordinance within thirty (30) days following receipt of a verbal warning or a written notice of violation. If a violation has not been corrected within thirty (30) days following a verbal warning or receipt of a written notice of violation, unless an extension of time or an appeal is pursued in accordance with this Ordinance, then an additional observed violation will be recorded.

C. A written notice of violation shall be sent to the responsible party by certified mail within five (5) working days following discovery of a continuing violation of this Ordinance. If the violation is not corrected within the time allowed by this Ordinance, unless an extension of time or an appeal is pursued in accordance with this Ordinance, then the assessed penalty fee must be paid within thirty (30) calendar days following the date of receipt of the certified mail notification.

D. The assessment of penalty fees for violations defined by this Ordinance shall be as established and maintained by a Resolution adopted by the governing body of the City of Moriarty.

PART 6. EXTENSION OF TIME AND APPEALS

A. The Mayor, or the Mayor's designee, may grant an extension of time to allow the responsible party to take corrective measures, provided that the general intent of this Ordinance has been met, but compliance with this Ordinance will cause practical difficulties or unnecessary hardship.

B. An extension of time may be granted for a period not to exceed one year and shall stipulate both short-term corrective measures and a schedule for completion of long-term corrective measures.

C. Any responsible party may appeal a written notice of violation to this Ordinance to the Governing Body within fifteen (15) calendar days of receiving a notice of violation of this Ordinance. Appeals shall be made in writing and filed at the Office the City Clerk. The appeal shall be considered by the Governing Body within fifteen (15) calendar days and, if the Governing Body's decision is adverse to the appellant, the appellant may appeal to District Court.

PART 7. SEVERABILITY

The provisions of this Ordinance shall be deemed to be severable, and should any part of this Ordinance be declared by the courts to be unconstitutional or invalid, such holdings shall not affect the validity of this Ordinance other that the part so declared to be unconstitutional or invalid.

PART 8. MORITORIUM ON PENALTY FEES

In order to provide adequate time for public education and individual actions to minimize violations of this Ordinance, there shall be a one year moratorium on penalty fees as required herein. The moratorium shall begin on the effective date of this Ordinance. All observed violations of this Ordinance during the moratorium shall be notified in writing from the City which shall include a reference to this Ordinance and an explanation of the violation.

PART 9. EFFECTIVE DATE

PASSED, ADOPTED, and APPROVED this _____ day of _____, 2012, by the Moriarty City Council.

_____
Mayor, City of Moriarty

_____
Moriarty City Clerk

APPENDIX C

Emergency Water Shortage Ordinance

ORDINANCE No. O-2012-01

AN ORDINANCE ESTABLISHING AN EMERGENCY WATER SHORTAGE PLAN FOR THE CITY OF MORIARTY, AND PROVIDING FOR ADMINISTRATION AND ENFORCEMENT THEREOF; AND REPEALING ORDINANCE O-2011-10, TITLED THE WATER CONSERVATION ORDINANCE.

NOW THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF MORIARTY, NEW MEXICO.

PART 1. STATEMENT OF POLICY

A. The Governing Body has determined that the public health, safety, and welfare requires maximum beneficial use of its available water resources to the extent to which it is capable, and that the conservation and most efficient use of water is in the best interest of the community.

B. The purpose of this Ordinance is to provide a means for the Governing Body to implement measures to manage water use in response to emergencies or unexpected events that may disrupt or endanger the municipal water supply.

C. As a basis for initiating actions pursuant to this Ordinance, the Governing Body finds that water shortages may exist due to one or more of the following conditions:

1. A general water supply shortage due to a sudden increase in demand or a reduction or limitation at the source of supply such as the occurrence of a prolonged drought condition;

2. The distribution system or storage facilities of the water utility are inadequate to meet the current or anticipated demands of the water service customers;

3. The water supply system is unable to maintain the minimum water quality standards in accordance with all applicable laws and regulations; or

4. A mechanical or structural breakdown of the supply, storage, and/or distribution facilities of the water supply system.

PART 2. AUTHORIZATION

A. The Governing Body may determine and declare that a water emergency exists within the municipal water service area and, upon such determination, to promulgate regulations, rules and conditions relative to the use of water in order to relieve the water shortage.

B. The Mayor, acting on behalf of the Governing Body and following public notice, is authorized to implement the emergency water shortage plan through the applicable provisions of this Ordinance.

PART 3. APPLICATION

A. The provisions of this Ordinance shall apply to all persons, customers and property served by the municipal water utility system. With the exception of a Temporary Water Emergency Surcharge, these provisions shall also apply to all water users within the corporate limits of the municipality.

B. All domestic wells within the corporate limits of Moriarty shall be governed by this Ordinance as authorized by state law [3-53-1, 3-53-1.1, 3-53-2 NMSA 1978].

C. Depending on the expected severity of the Water Emergency situation, the Governing Body shall not be limited to the defined requirements of this Ordinance. Should the Water Emergency be of such magnitude to demand more stringent action such as closure of facilities and services, the Governing Body may impose more severe restrictions or actions. The Mayor shall have the authority, with subsequent confirmation by the Governing Body, to declare an immediate Water Emergency in response to a catastrophic event affecting the water supply system.

PART 4. WATER EMERGENCY STAGES

Any of the following water emergency stages may be declared by the Governing Body following a determination regarding the severity of conditions leading to a water shortage. Such determination shall be based on the best available information and data regarding the water supply and distribution system.

There are three water emergency stages which are triggered by an impending shortage of water estimated to occur during a specified period of time in the immediate future. If the severity of the water emergency lessens, the Governing Body may downgrade the water shortage to a lower stage or discontinue the water emergency. The water use restrictions and regulations of each stage are cumulative and are added to the next higher level stage, unless the higher stage has a more stringent requirement.

A. **Stage One: Water Shortage Advisory – Voluntary Compliance.** Whenever the estimated or projected rate of demand on the water system exceeds the estimated or projected rate of withdrawal such that it appears that there will be a shortage of water over the next twelve (12) month period, a Stage One Water Shortage Advisory will be declared. The following requirements shall be in effect, and unless otherwise noted, are voluntary but strongly encouraged:

1. The Mayor shall make public announcements through the local news media that an impending water problem exists, explaining the water conservation requirements of the Stage One Water Shortage Advisory;

2. All residents are encouraged to minimize indoor water use by utilizing high efficiency fixtures and appliances, decreasing water use for eating and cleaning purposes, and eliminating all on-site water leaks;

3. Restaurants and banquets are requested to discontinue serving non-bottled drinking water, except upon request;

4. Hotels and motels are urged to implement water conservation measures, including less frequent changing of towels and bed linens during short stays, except upon request;

5. With the exception of hand watering, drip, or subsurface irrigation, all spray irrigation shall be prohibited between 11:00 a.m. and 6:00 p.m. daily from the first day of April to the last day of October of each calendar year;

6. The use of potable (drinking) water for washing down sidewalks, driveways, parking areas, tennis courts, patios, or other paved areas shall be prohibited;

7. Routine fire hydrant flushing shall be curtailed except to alleviate specific complaints;

8. Commercial and industrial water users are urged to implement water conservation plans for their facilities and decrease water consumption. A water conservation plan for commercial and industrial facilities shall include conservation methods for indoor water use, outdoor water use, and water recycling on site. The water conservation plan may be requested for review and acceptance by the City;

9. All municipal facilities will go on reduced water budgets and outdoor watering of parks, landscaping, and recreational areas shall implement nighttime watering schedules;

10. The use of harvested (stored) rainwater and household graywater for outdoor watering is recommended and encouraged; and

11. All domestic well operators are urged to reduce water use to the minimum levels of absolute necessity.

B. **Stage Two: Water Shortage Alert – Mandatory Compliance.** Whenever the estimated or projected rate of demand on the water system exceeds the estimated or projected rate of withdrawal such that it appears that there will be a shortage of water over the next six (6) month period, a Stage Two Water Shortage Alert will be declared. The following mandatory requirements, in addition to the requirements of the Stage One Water Shortage Advisory, shall be in effect:

1. The Mayor shall make public announcements through the local news media that an immediate water problem exists, explaining the water conservation requirements of the Stage Two Water Shortage Alert;

2. With the exception of hand watering, drip or subsurface irrigation, use of rainwater harvested water, and graywater, all landscape watering will be limited to no more than 3 days each week per following schedule. The last number of the street address shall determine watering days. Odd numbers may water only on Sunday, Wednesday, or Friday. Even numbers may water only on Tuesday, Thursday, or Saturday;

3. No new in-ground landscaping shall be planted except for xeriscapes which utilize drip or subsurface irrigation, or water collected from rainwater harvesting or graywater;

4. The use of potable (drinking) water for washing of vehicles, equipment, trailers, or boats shall be prohibited, except by use of a hand-held bucket or hose with a shut-off nozzle; and

5. A Temporary Water Emergency Surcharge may be instituted by action of the Governing Body as an overlay onto the existing water rate structure on the first billing cycle following declaration of a Stage Two Water Shortage Alert or a Stage Three Water Shortage Emergency. If the Temporary Water Emergency Surcharge is implemented by the Governing Body, a surcharge for residential customers shall be applied at a rate of five dollars ($5.00) for every thousand gallon increment above 14,000 gallons per billing cycle; and all industrial and commercial users will be surcharged one percent (1%) of the total cost of water billed for each month during the Stage Two Water Shortage Alert or Stage Three Water Shortage Emergency.

C. **Stage Three: Water Shortage Emergency – Mandatory Compliance.** Whenever a major failure or disruption of the municipal water supply system occurs, or whenever the estimated or projected rate of demand on the water system exceeds the estimated or projected rate of withdrawal such that it appears that there will be a shortage of water over the next two (2) month period, a Stage Three Water Shortage Emergency will be declared. The following mandatory requirements, in addition to the requirements of the Stage One Water Shortage Advisory and the Stage Two Water Shortage Alert, shall be in effect:

1. The Mayor shall make public announcements through the local news media that a severe water shortage problem exists, explaining the water conservation requirements of the Stage Three Water Shortage Emergency;

2. Subject to certain exceptions, outdoor watering of any lawn, garden, or landscaped area shall be prohibited. Watering performed with permanent drip irrigation system, sub-surface irrigation, rainwater harvested water, or graywater

is exempt from these requirements. Using a hand-held bucket or hose with a shut-off nozzle to water trees, shrubs, and containerized plants is allowed;

3. Nurseries watering container plant stock using a hand-held bucket or hose with a shut-off nozzle shall be exempt from restrictions of this Ordinance;

4. Fire hydrant flushing shall be prohibited except for fire fighting, or emergency potable water supply for human or animal consumption;

5. Use of potable water for recreational or aesthetic purposes such as water slides, fountains, or yard play shall be prohibited;

6. All commercial and industrial water users shall implement a water conservation program to reduce water use to the minimum levels of absolute necessity.

PART 5. VIOLATIONS AND PENALTIES

A. The Mayor, or the Mayor's designee, shall be responsible for the enforcement of this Ordinance and may recommend policies, rules, or regulations to the Governing Body to carry out the intent and purposes of this Ordinance.

B. Following a determination by the Mayor that a violation of any mandatory requirement of this Ordinance has occurred, the responsible party shall be issued a verbal and written warning to abate such violation immediately.

C. After written notification, should any responsible party continue to violate the stated mandatory requirement, then that party shall upon conviction be subject to a fine not exceeding five hundred dollars ($500.00) or imprisonment for a period not exceeding 90 days, or both such fine and imprisonment. Each violation of any mandatory requirement of this Ordinance shall be considered a separate offense. Water service may be suspended for repeat violators.

PART 6. SEVERABILITY

The provisions of this Ordinance shall be deemed to be severable, and should any part of this Ordinance be declared by the courts to be unconstitutional or invalid, such holdings shall not affect the validity of this Ordinance other that the part so declared to be unconstitutional or invalid.

PART 7. REPEAL

Ordinance No. O-2011-10 of the City of Moriarty is hereby repealed. The adoption of this Ordinance, however, shall not affect nor prevent any pending or future prosecution of, or action to abate, any existing violation of Ordinance No. O-2011-10 if the violation is also a violation of the provisions of this Ordinance.

PART 8. EFFECTIVE DATE

This Ordinance is hereby declared to be an emergency on the grounds of urgent public need, and it is therefore to become effective immediately upon its passage.

PASSED, ADOPTED, and APPROVED this 25th day of July, 2012, by the Moriarty City Council.

Mayor, City of Moriarty

ATTEST:

Moriarty City Clerk