



Natural Resources Conservation Service
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May 12, 2011

NEW MEXICO BULLETIN NO. 210-11-05

SUBJECT: ENG – Remote Well Solutions

TO: All Employees

Purpose: To inform you of a pumping plant (PS533) power source that improves efficiency and reduces energy use.

Expiration Date: September 30, 2011.

USDA-NRCS in New Mexico is nearing completion of a State Component Conservation Innovation Grant with Remote Well Solutions (RWS). The CIG has demonstrated the potential cost and energy savings associated with replacing older, poorly sized diesel driven pumping plants with properly engineered systems. The CIG indicates that the greatest returns (sometimes up to 70% reductions in fuel costs) can be achieved when outdated systems have one or more of the following characteristics: oversized generators (relative to power need); throttled pumping plants; or no automatic shut-off to prevent the current system from pumping even when a storage tank is full.

A letter and brochure from the company are attached. Review the enclosures and distribute as appropriate. NRCS does not endorse a specific product and this is one power source that can be installed. However, the RWS power source will meet the Pumping Plant practice standard (PS-533). Criteria in the New Mexico Pumping Plant Practice Standard states that, "The maximum capacity of pumps installed in wells shall be less than the capacity of the well." This criterion can be waived by the SCE based on pumping plant design and use of a monitoring system that will not allow the pump suction air. However, Farm Bill payments for pumping plants are based on the computed pump horsepower needed to furnish water from the well's pumping depth to the system's watering facility or facilities.

Please contact Roger Ford at (505)761-4430 if you have any questions.

A handwritten signature in black ink that reads "Dennis L. Alexander - Sr., Acting".

for DENNIS L. ALEXANDER
State Conservationist

Attachments

Remote
Well
Solutions

“Engineering solutions to lower your bottom line”

We are happy to notify all New Mexico NRCS offices of our high production fully automated Pumping Plants by Remote Well Solutions LLC of Cloudcroft New Mexico.

Our line of automated Well Watchman pumping plants are designed for the remote livestock wells where utility power is unavailable and solar production is not sufficient to meet the consumption of livestock loads. With a propane fueled generator supporting a standard A.C. submersible well pump complimented with a fully automated control system the Well Watchman systems will provide many years of dependable water production at the highest production rates possible.

Remote Well Solutions LLC participating in New Mexico CIG grant placed our Well Watchman systems on wells in Lincoln and Chaves Counties. The systems were placed on wells from 500' to 700' deep replacing diesel generators, with livestock loads that ranged from under one hundred to several hundred animal units. The systems operated flawlessly supporting the livestock numbers. The systems reduced the fuel costs on every well anywhere from 30% to 60% of the diesel fuel operation. The systems eliminated all incidents of ground water waste due to over filling and reduced CO2 emissions by 30% to 70 %.

Remote Well Solutions LLC currently offers 3 systems:

- **Well Watchman I** for pumping from the well into a storage tank
- **Well Watchman II** pump from a well into a storage tank at distant locations
- **Solar Assist model** which will automatically take command of the water production process during solar's non productive hours.

Our systems have no depth limitations, and when supported by a large propane tank will start and stop the water production process automatically, based on livestock demand protecting both pump and generator without the need of an on site operator. Also providing the producer with piece of mind and relieving the requirement of repeated trips to remote well sites. And in most all cases higher water production rates with lower fuel costs.

In every case our systems offer higher daily production rates than solar or windmill systems. Our systems are dependable and proven and will increase daily water production.

Remote Well Solutions
 11 Grace Way
 Cloudcroft New Mexico

88317

575-687-2092

remotewellsolutions.com

“When our system is installed its not just your well anymore, its our's too. We'll treat it that way”



When compared to the other systems available The Well Watchman will typically have a much lower up front cost with much higher production rates.



If water is the limiting factor to your operations the Well Watchman can increase water production when compared to most other non utility supported production systems.



The Well Watchman monitors the fill time of your storage tank and if it is taking to long to fill the tank possibly because of a broken float or pipe, will recognize that there is a problem and shutdown the system instead of just pumping water out onto the ground.



20 gallons of propane will deliver ~ 9300 gallons of water on a 2 horsepower 7.5 gpm pump at 4000' elevation with a Well Watchman System.

Remote Well Solutions



Remote Well Solutions

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remotewellsolutions.com

REMOTE WELL SOLUTIONS

Introduces
The
Well Watchman

Delivering The Full
Production Potential Of Your Well
Automatically Where Utility Power Is
Unavailable



Mike & Corina Lisk

John 3:16



Luke 13:10-13

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A generator repeatedly running out of fuel while the well pump is running in every case burden both generator and pump shortening each piece operational life. In many cases operators drive out to remote well sites fill a generator with fuel then start it and leave knowing that when the fuel is consumed the pump will turn OFF. Neither generator or pump are designed to operate in this manner. The Well Watchman will monitor the fuel level and on a low fuel condition perform a controlled system shutdown protecting both pump and motor. With the use of a large fuel tank it can allow the operator to decrease the number of trips to the well site now being made to refuel the generator.



Remote Well Solutions can design a Well Watchman to fit your livestock needs

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The Well Watchman is a patented system with a propane fueled electric generator and an intelligent control panel that will automatically operate with out operator interface producing electricity to support a deep well pump, maintaining water levels in your water storage tank. Our system will monitor critical points providing operational protection for the pump and generator and display critical and important data on a LCD screen inside the control panel to the operator with production, maintenance and shutdown messages:

- . Total Gallons of Water Made
- . Gallons of Water Since Reset
- . Hours of Generator Operation
- . Low Fuel Shutdown
- . No Water Flow Shutdown
- . Low Oil Shutdown
- . No Power/Tripped Breaker Shutdown
- . Excessive Run-time Shutdown
- . Start Attempts Exceeded
- . Temp Below 32 degrees F
- . Time to Clean Air Filter
- . Time to Change Oil
- . Time to Change Spark Plug
- . Time to Change Battery

All conditions are resettable except Total Gallons of Water Made and Hours of Generator Operation by pressing a reset button inside the control panel. We see our system as the closest solution to having utility power.

Eliminate the risks and hazards of working on a windmill



The well watchman pumps only the water needed to fill your storage and water your livestock without waste of fuel or water.



The above pictures are of a Well Watchman installation on a 700' deep well with 7.5 gpm pump. This water is being produced by the

Well Watchman @ \$0.004 per gallon in propane fuel costs That is less than 1/2 a penny per gallon of water.