# LCB File No. R009-06

# PROPOSED REGULATION OF THE STATE ENGINEER

## NOTICE OF MEETING TO REVIEW PUBLIC COMMENT AND AGENCY RESPONSE ON THE PROPOSED REGULATIONS OF THE STATE ENGINEER FOR WATER WELL AND RELATED DRILLING

For the purposes of reviewing public comment received from all interested persons, the Nevada Division of Water Resources will hold a final public meeting regarding the adoption, amendment or repeal of Regulations for water Well and Related Drilling as set forth in Chapter 534 of the Nevada Administrative Code.

Workshops and hearings to receive public comment on the proposed regulation were held in Carson City, Elko and Las Vegas on March 27, 29 and 31, 2006, and the Division of Water Resources has subsequently prepared responses to all issues raised. At the hearing the final date for submittal of written comments was set for May 1, 2006, and it was agreed that at least one meeting would be held to review the changes proposed as a result of the comment process prior to adoption of the regulation. The revised regulation will then be re-submitted to the Legislative Counsel for approval and codification. Finally, the Legislative Commission subcommittee that reviews all regulations upon adoption will examine the regulation.

This informal meeting will begin at 9:00 am, Monday, May 22, 2006, at the Division of Water Resources hearing room located on the Second Floor at 901 South Stewart Street, Carson City, Nevada. A summary of written and oral comments received to date and the proposed response of the Division of Water Resources can be viewed at http://water.nv.gov or a copy can be obtained at no charge by calling the Division at 775-684-2800.

Upon adoption of any regulation, the agency, if requested to do so by an interested person, either before adoption or within 30 days thereafter, will issue a concise statement of the principal reasons for and against its adoption or incorporate therein its reason for overruling the consideration urged against its adoption.

# LCB File No. R009-06

# PROPOSED REGULATION OF THE STATE ENGINEER

## DRAFT AMENDED WELL DRILLING REGULATIONS

**Last revised January 18, 2006**

Note: Matter in ***blue bolded italics*** is new
And matter ~~[between brackets in red]~~ is material to be omitted

## CHAPTER 534 - UNDERGROUND WATER AND WELLS

### GENERAL PROVISIONS

**LICENSE TO DRILL WELL**



**DUTIES OF WELL DRILLERS**



**DRILLING, CONSTRUCTION AND PLUGGING OF WELLS AND BOREHOLES**

**WAIVERS**



**GENERAL PROVISIONS**

**NAC 534.010 Definitions. (**NRS 534.020**,** 534.110**)** As used in this chapter, unless the context otherwise requires, the words and terms defined in NAC 534.015 to 534.240, inclusive, have the meanings ascribed to them in those sections.

**NAC 534.015 "Abandon" defined. (**NRS 534.020**,** 534.110**)** "Abandon" means to discontinue the use of a well or borehole or to leave the well or borehole in such a state of disrepair that to use it would be impracticable, may result in contamination of ground water or may otherwise pose a hazard to the health or safety of the general public.

**NAC 534.020 "Annular space" defined. (**NRS 534.020**,** 534.110**)** "Annular space" means the space between two cylindrical objects, one of which surrounds the other, such as the space between the walls of the well bore and the casing.

**NAC 534.030 "Aquifer" defined.** "Aquifer" has the meaning ascribed to it in NRS 534.0105.

**NAC 534.040 "Artesian well" defined.** "Artesian well" has the meaning ascribed to it in NRS 534.012.

**NAC 534.042 "Bentonite grout" defined. (**NRS 534.020**,** 534.110**)** "Bentonite grout" means a ***commercially manufactured*** product that, ***when mixed according to the manufacturers specifications,*** is specifically designed to seal and plug wells and boreholes and:

1. Consists of not more than 87.9 percent water and not less than 12.1 percent bentonite by weight of water;
2. Has the ability to gel;

3. Does not separate into water and solid materials after it gels;

4. Has hydraulic conductivity or permeability values of $10^{-7}$centimeters per second or less; and

5. Has a fluid weight of not less than 9 pounds per gallon.

**NAC 534.043 "Blast hole" defined. (**NRS 534.020**,** 534.110**)** "Blast hole" means a borehole that is drilled and, as soon as practicable, is loaded with explosives for mining purposes.

**NAC 534.045 "Board" defined.** "Board" means the statewide well drillers' advisory board.

**NAC 534.047 "Borehole" defined. (**NRS 534.020**,** 534.110**)** "Borehole" means a penetration in the ground that is deeper than the longest dimension of its opening at the surface and is made to obtain geologic, hydrologic, geophysical or geotechnical information, to obtain information relating to engineering or for any other purpose other than for use as a well.

**NAC 534.048 "Bridge" defined. (**NRS 534.020**,** 534.110**)** "Bridge" means an obstruction in the well bore or annular space of a borehole or well caused when the walls of the well bore collapse or when materials are jammed or wedged into the well bore or annular space.

**NAC 534.050 "Casing" defined.** "Casing" means the conduit required to prevent waste and contamination of the ground water and to hold the formation open during the construction or use of the well.

**NAC 534.060 "Cement grout" defined.** "Cement grout" means a mixture of portland cement, sand and water which contains at least seven bags of cement per cubic yard and not more than 7 gallons of clean water for each bag of cement (1 cubic foot or 94 pounds).

**NAC 534.070 "Concrete grout" defined.** "Concrete grout" means a mixture of portland cement, sand, 1/4-inch minus aggregate and water which contains at least five bags of cement per cubic yard of concrete and not more than 7 gallons of clean water per bag of cement (1 cubic foot or 94 pounds).

**NAC 534.080 "Conductor casing" defined. (**NRS 534.020**,** 534.110**)** "Conductor casing" means the temporary or permanent casing used in the upper portion of the well bore to prevent collapse of the formation during the construction of the well or to conduct the gravel pack to the perforated or screened areas in the casing.

**NAC 534.094 "Contaminant" defined. (**NRS 534.020**,** 534.110**)** "Contaminant" means any chemical, mineral, live organism, organic material, radioactive material or heated or cooled water that may adversely affect the quality of ground water.

**NAC 534.095 "Contamination" defined. (**NRS 534.020**,** 534.110**)** "Contamination" means the impairment of water quality by the introduction of contaminants into the ground water.

**NAC 534.100 "Division" defined.** "Division" means the division of water resources of the state department of conservation and natural resources.

**NAC 534.110 "Domestic use" defined.** "Domestic use" has the meaning ascribed to it NRS 534.013.

**NAC 534.112 "Drill rig" defined. (**NRS 534.020**,** 534.110**)** "Drill rig" means any power-driven percussion, rotary, boring, coring, digging, jetting or augering machine used in the construction of a well or borehole.

**NAC 534.113 "Drive point well" defined. (**NRS 534.020**,** 534.110**)** "Drive point well" means a temporary monitoring well constructed by driving a drive point attached to the end of a section of pipe into the ground for the purpose of obtaining geotechnical or environmental information. The term is synonymous with a push point well.

**NAC 534.120 "Exploratory well" defined. (**NRS 534.020**,** 534.110**)** "Exploratory well" means a well constructed pursuant to paragraph (a) of subsection 2 of NRS 534.050 to determine the availability of water or whether an aquifer is capable of transmitting water to a well.

**NAC 534.140 "Ground water" defined. (**NRS 534.020**,** 534.110**)** "Ground water" means water below the surface of the land that is in a zone of saturation.

**NAC 534.148 "Monitoring well" defined. (**NRS 534.020**,** 534.110**)** "Monitoring well" means any well that is constructed to evaluate, observe or determine the quality, quantity, temperature, pressure or other characteristic of ground water or an aquifer. The term includes an observation well, piezometer, drive point well or vapor extraction well.

**NAC 534.150 "Neat cement" defined. (**NRS 534.020**,** 534.110**)** "Neat cement" means a mixture of:

1. Clean water and cement in a ratio of not more than 5.2 gallons of water per bag of portland cement (1 cubic foot or 94 pounds); or
2. Clean water, cement and sodium bentonite in a ratio of not more than 7.8 gallons of water per 3.76 pounds of sodium bentonite by dry weight and one bag of portland cement (1 cubic foot or 94 pounds).

**NAC 534.160 "Nominal size" defined.** "Nominal size" means the manufactured commercial designation of the diameter of a casing. An example would be casing with an outside diameter of 12 3/4 inches which may be nominally 12-inch casing by manufactured commercial designation.

**NAC 534.165 "Observation well" defined. (**NRS 534.020**,** 534.110**)** "Observation well" means a borehole in which a temporary casing has been set and which is used to observe, test and measure the elevation of the water table, the pressure variations within an aquifer and the movement of contaminants inside or outside a zone of saturation.

**NAC 534.175 "Permit" defined.** "Permit" means the written permission from the state engineer to appropriate public waters for a beneficial use from a surface or underground source, at a specific point of diversion, under limited circumstances.

**NAC 534.179 "Piezometer" defined. (**NRS 534.020**,** 534.110**)** "Piezometer" means a well that is constructed to measure water pressure or soil moisture tensions at one or more discrete intervals.

**NAC 534.182 "Pitless adapter" defined. (**NRS 534.020**,** 534.110**)** "Pitless adapter" means a commercially manufactured device designed for attachment to openings through the casing of a water well that permits water service pipes to pass through the wall or an extension of a casing and prevents the entry of contaminants into the well or water supply.

**NAC 534.183 "Plug" defined. (**NRS 534.020**,** 534.110**)** "Plug" means the procedure in which a well or borehole is sealed after it is abandoned.

**NAC 534.185** ***"Public land survey"*** ~~**["Public survey"]**~~ **defined. (**NRS 534.020**,** 534.110**)** ***"Public land survey"*** ~~["Public survey"]~~ means the description of the location of land using the survey system of the United States Government and includes the 40-acre subdivision within a quarter-quarter section, quarter section, section, township and range.

**NAC 534.188 "Reconditioning" defined. (**NRS 534.020**,** 534.110**)** "Reconditioning" means the deepening, reaming, casing, recasing, perforating, reperforating, installing of liner pipe, packers and seals or any other significant change in the design or construction of a water well.

**NAC 534.190 "Seal" defined. (**NRS 534.020**,** 534.110**)** "Seal" means the watertight seal established in a borehole or the annular space between the well casings or a well casing and the well bore to prevent the inflow or vertical movement of surface water or shallow ground water, or to prevent the outflow or vertical movement of water under artesian pressures. The term includes a sanitary seal.

**NAC 534.192 "Seismic shot hole" defined. (**NRS 534.020**,** 534.110**)** "Seismic shot hole" means a borehole in which an explosion is detonated to assist studies of the geology of the earth.

**NAC 534.194 "Sodium bentonite" defined. (**NRS 534.020**,** 534.110**)** "Sodium bentonite" means a colloidal clay that:

1. Consists primarily of the mineral montmorillonite;
2. Has the ability to swell; and
3. May be mixed with water to form bentonite grout.

**NAC 534.195 "Static water level" defined. (**NRS 534.020**,** 534.110**)** "Static water level" means the stabilized level or elevation of the surface of the water in a well or borehole that is not being pumped and is not affected by the pumping of other wells or boreholes.

**NAC 534.205 "Vapor extraction well" defined. (**NRS 534.020**,** 534.110**)** "Vapor extraction well" means any well constructed to remove vapors that may contaminate the ground water.

**NAC 534.210 "Waste" defined.** "Waste" has the meaning ascribed to it in NRS 534.0165.

**NAC 534.220 "Well" defined. (**NRS 534.020**,** 534.110**)** "Well" means a penetration in the ground made for the purpose of measuring, testing or sampling the underground strata or producing ground water. The term includes a water well, monitoring well or exploratory well.

**NAC 534.235 "Well bore" defined. (**NRS 534.020**,** 534.110**)** "Well bore" means a cylindrical hole made in the construction or drilling of a well.

**NAC 534.240 "Well driller" defined.** "Well driller" has the meaning ascribed to it in NRS 534.017.

**LICENSE TO DRILL WELL**

**NAC 534.280 Application for license or renewal of license. (**NRS 534.020**,** 534.110**)**An application for a well-drilling license or the renewal of a well-drilling license must be submitted to the division. The application must be completed and accompanied by the fee prescribed in NRS 534.140. ***The application for a well-drilling license is valid for not more than three (3) examination dates immediately following the filing of the application.***

**NAC 534.282 Qualifications of applicant; denial of application. (**NRS 534.020**,** 534.110**)**

1. An applicant for a well-drilling license must:

***(a) Be at least 18 years of age and have obtained a high school diploma or have obtained a GED.***

***(b) Be a citizen of the United States of America***

***(c) Complete and submit the application form provided by the Division; and***

***(d) Pay the prescribed application fee; and***

***(e)*** ~~[(a)]~~ Demonstrate a good working knowledge of:

(1) Standard drilling practice;

(2) The regulations of the state engineer and applicable laws relating ***to well drilling*** ~~[to the construction of wells]~~; and

(3) The method by which land is described by ***public land survey*** ~~[public survey]~~.

***(f)*** ~~[(b)]~~ Have at least 2 years of experience ***as a well driller*** determined to be appropriate by the state engineer ***and verified by at least four (4) references*** for the license for which the applicant applies.

***(g)*** ~~[(c)]~~ Pass an examination, consisting of ***three sections:***

***(1) a written examination for which the applicant must obtain a score of at least 70%,***

***(2) providing the public land survey description of a well location from a map and***

***(3) an oral examination conducted by the board.*** ~~[an oral portion and a written portion, conducted by the state engineer and the board.]~~

2. The state engineer may deny an applicant a license if he:

(a) Fails to notify the division that he cannot appear for the examination as instructed by a notice to appear before the state engineer or the board;

***(b) Fails to pass all three portions of the examination pursuant to NAC 534.282(1)(g) within the time frame for which the application is valid.***

~~[(b) Has notified the division on three occasions that he cannot appear for the examination as instructed by a notice to appear before the state engineer or the board; or~~

~~(c) Has failed any portion of the examination three times.]~~

**NAC 534.286 Oral examination of applicants. (NRS 534.020, 534.110)** Except as otherwise provided in NAC 534.288, the board shall conduct the oral portion of the examination for each applicant for a well-drilling license. The oral portion of the examination must be conducted to determine the sufficiency of the applicant's:

1. Knowledge of the provisions of chapter 534 of NRS and this chapter; and
2. Qualifications and experience***; and***

***3. The minimum construction standards established by the regulations for well construction and abandonment; and***

***4. Proficiency in the operating procedures and construction methods associated with the various types of water well drilling rigs; and***

***5. Ability to resolve problem situations that may arise during the construction or abandonment of a well.***

**NAC 534.288 Board not required to conduct oral examination of certain applicants. (NRS 534.020, 534.110)** The board is not required to conduct the oral portion of the examination for an applicant for a well-drilling license who:

1. Receives a score of less than 70 percent on the written portion of the examination; or
2. Is unable to demonstrate his ability to locate a well ***by public land survey*** on a topographic map.

**NAC 534.290 Revocation or denial of license. (NRS 534.020, 534.110)**

1. The state engineer may revoke or refuse to reissue a well-drilling license if he determines, after an investigation and a disciplinary hearing, that the well driller has:

~~[(a) Intentionally made a material misstatement of facts in his application for a license;~~
~~(b) Intentionally made a material misstatement of facts in a log or record of work;~~
~~(c)]~~ Been found to be incompetent as a well driller by the state engineer or the board;
~~[(d) Failed to submit a log or record of work for wells drilled in accordance with the provisions of this chapter;~~
~~(e) Failed to comply with or violated any of the provisions of this chapter;~~
~~(f) Failed to comply with or violated any law applicable to well drillers;~~
~~(g) Falsely sworn to any affidavit, proof of completion, proof of beneficial use, log or any other document filed with the division;~~
~~(h)]~~ ***(b)*** Supplied false information to an owner of a well or a holder of a permit or his agent; or
~~[(i)]~~ ***(c)*** Failed to report information concerning improper construction or the abandonment of a well pursuant to NAC 534.448.

2. The state engineer will avail himself of the services of the board pursuant to NRS 534.150 if he determines that to do so is appropriate under the circumstances.

***Infractions of the Regulations for Water Well and Related Drilling; Demerit points; Suspension of license; Reinstatement of license.***

***1. Licensed well drillers who commit the infractions listed below in Table 1, as determined by the Division, shall have assessed against their well drilling license the number of points assigned to the infraction.***

*TABLE 1. Infractions of Administrative Requirements*

| *Notice of Intent Card / Authorization* | *Points* |
|---|---|
| *Failure to file a Notice of Intent Card in accordance with NAC 534.320* | *25* |
| *Failure to receive authorization to remove drill rig from a well site prior to the well being completed or abandoned.* | *75* |
| ***Well Driller's Report (Well Log)*** | |
| *Intentionally making a material misstatement of fact in an official well driller's report or amended official well driller's report or failure to file a well driller's report* | *75* |
| *Well drilling log submitted late* | *10* |
| *Well abandonment log submitted late* | *10* |
| ***Licenses*** | |
| *Intentionally making a material misstatement of fact in the application for a well driller's license* | *100* |
| *Failure to have a well driller's license in possession at the work site and failure to present the license upon request by Division personnel* | *10* |
| *Failure to have a licensed driller on site during any activity involving the construction or abandonment of a well and any activity involving the operation of the drill rig or related drilling equipment. The license(s) penalized will be the principal licensed driller for the well drilling company and the licensed driller on the Notice of Intent Card* | *50* |
| ***Well construction*** | |
| *Failure to comply with the regulations regarding well construction standards including but not limited to proper placement of the annular seal, sub-standard well casing, improper products or procedures used during well construction or well abandonment and failure to protect against contamination,* | *75* |
| *Failure to make the well accessible to water level measurements* | *30* |
| *Failure to properly control artesian flow* | *30* |

***Approvals***

| | |
|---|---|
| ***Construction of a well in connection with a water right permit that is greater than 300 feet from the described point of diversion or within a different quarter-quarter, section, township and range than the described point of diversion*** | ***25*** |
| ***Failure to comply with any permit or waiver conditions on the well such as depth of annular seal, location of perforations, minimum or maximum well depth, etc.*** | ***50*** |

***Miscellaneous***

| | |
|---|---|
| ***Any other violation of NRS 534 and the Regulations for Water Well and Related Drilling*** | ***To be determined by the division*** |

2. ***Points will be assessed against a well driller's license upon verification by the State Engineer that an infraction has occurred. Points will be assessed at the time the State Engineer notifies the well driller that an infraction has occurred regardless of when the infraction occurred.***
3. ***If a licensed well driller accumulates 100 or more demerit points, his well drilling license is, after a hearing before the state engineer pursuant to NRS 534.160, suspended indefinitely. The well driller will be notified by the Division that his license is suspended and the well driller cannot engage in any activity where a license is required until such time as the license is reinstated.***
4. ***A well drilling license that has been suspended may be reinstated under the following conditions:***
    - ***(a) The number of demerit points assessed against the suspended license must be reduced to 75 points or less; and***
    - ***(b) The well driller must appear before the state engineer at a competency hearing for the purpose of satisfying the state engineer that the he is competent to continue as a licensed well driller in the State of Nevada; and***
    - ***(c) The well driller must resolve all outstanding complaints to the satisfaction of the Division; and***
    - ***(d) The well driller must submit an application with the prescribed filing fees and pass the well drilling examination.***
5. ***Demerit points may be removed by the Division as follows:***
    - ***(a) 5 demerit points for each hour of approved continuing education successfully completed by the well driller as determined by the Division up to a maximum of 50 points per year.***
    - ***(b) One-half of the demerit points on a well driller's license will be removed if the well driller is free from any infractions for an entire license renewal cycle.***
    - ***(c) 20 demerit points will be removed for taking and passing the written portion of the well driller's exam. A driller may exercise this option once every other year.***

**NAC 534.292 Notice to renew license; notice of change in mailing address.**

1. The division will mail to each licensed well driller a notice to renew his license approximately 30 days before the expiration of the license. Failure to receive the notice does not relieve a well driller of his obligation to pay the fee for renewal in a timely manner.

2. A well driller shall notify the division of any change in his mailing address within 30 days after the change.

***EXPIRATION AND RENEWAL OF LICENSE***

***1) Expiration of Licenses. All licenses shall expire on June 30 of each year after issuance.***

***2) Renewal Application. A license may be renewed by submitting a license renewal application including the following:***

- ***a) A completed application on a form provided by the Division. An application to renew a license for an individual licensed well driller shall be signed by the individual.***
- ***b) The renewal fee required by NRS 534.140.***
- ***c) Verification that the applicant has obtained the required continuing education credits.***
- ***d) Continuing Education Requirements. Four (4) credit units are required for renewal of a license for the licensing period beginning July 1, 2007. Eight (8) credit units are required for renewal of a license for any licensing period beginning on or after July 1, 2008.***

***3) Welding Competency. A driller may be required to obtain a certificate of welding competency, from the American Welding Society or similar organization, if the driller has been issued a Notice of Violation for welding that does not comply with the well construction standards.***

***PROCESSING APPLICATION TO RENEW LICENSE***

***1) Processing Applications for Renewal. Applications for renewal will be processed in the order received by the Division. The Division shall receive a complete application for renewal no later than June 15 to assure that the license will remain in force without interruption. If the state engineer determines that the application is complete and the applicant is qualified, the license will be renewed for the period ending on June 30 of the year after approval of the renewal.***

***2) Regulatory Compliance Required for Renewals. A license will not be renewed if the applicant:***

- ***a) has not submitted all required notices of intent and well driller's log and record of work reports,***
- ***b) has not complied with all orders requiring repair or abandonment of improperly constructed wells or***
- ***c) is not otherwise in compliance with Chapter 534 of the Nevada Revised Statutes or these regulations.***
- ***d) has acquired 100 demerit points or more against his license.***
- ***e) Compliance History. If the state engineer determines, after consulting the Well Driller's Advisory Board, that the applicant has exhibited an unacceptable compliance history, the state engineer may deny renewal, refuse renewal for a specified time, or renew with conditions. Up to five (5) years of the most recent licensed or permitted history may be considered to determine compliance.***

**NAC 534.293 Additional requirements for license if prior license has expired or been revoked. (**NRS 534.020**,** 534.110**)**A well driller whose license has been expired for more than 1 year or whose license has been ***suspended or*** revoked:

1. Must file a new application with the fee required by NRS 534.140 to obtain a license.

2. ~~[Before resolving a complaint in his file, must appear before the board for disposition of the complaint.]~~

~~[3. May be required by the board to]~~ ***Must*** pass the examination required by NAC 534.282.

***3. Must reduce the number of accumulated demerits against his license to less than 75.***

***4. An applicant shall provide verification of earned credit units required for the entire period since the license was last issued***

**NAC 534.294 Scope of authority under license; issuance of restricted licenses. (**NRS 534.020**,** 534.110**)**

1. A well-drilling license authorizes the licensee to drill, recondition or plug the following types of wells:

(a) Water wells;

(b) Monitoring wells; and

(c) Geothermal wells.

2. The state engineer may issue restricted well-drilling licenses that limit a well driller to a class of work or type of drilling rig, or both, for which the board has determined the driller is qualified. The following restricted well-drilling licenses may be issued:

(a) A monitoring well-drilling license;

(b) A geothermal well-drilling license;

(c) A license to drill wells for projects of the Federal Government; and

(d) Any other class of well-drilling license determined to be appropriate by the board and the state engineer.

**NAC 534.296 Issuance and expiration of temporary license; employment of prospective temporary licensee. (**NRS 534.020**,** 534.110**)**

1. The state engineer may issue a temporary well-drilling license to an employee of a drilling contractor if the drilling contractor has insufficient personnel to complete existing contracts.

2. If the employee of a drilling contractor submits an application for a temporary license, the drilling contractor or an employee of the drilling contractor must:

(a) Hold a well-drilling license issued by the state engineer; and

(b) Sign and submit a letter to the division containing:

(1) A request that the person named in the application be given a temporary license;

(2) A statement from the contractor~~[,]~~ ***or*** the licensed employee of the contractor ~~[or another licensed well driller]~~ stating that the person who is making the statement will take full responsibility for the drilling performed by the prospective temporary licensee; and

(3) A statement that the prospective temporary licensee will comply with all regulations for drilling wells.

3. The state engineer will evaluate the qualifications of the prospective temporary licensee and may issue a temporary license which expires on the date of the next available examination conducted by the board.

***4. The temporary license will not be re-issued until the applicant receives a passing score on the written portion of the examination.***

***5. A temporary license will not be approved or re-issued if the applicant has had an application denied by the state engineer pursuant to NAC 534.282(2).***

***6.*** ~~[4.]~~ The drilling contractor shall inform the division in writing if the employment of the temporary licensee is terminated before the date of the next available examination. The

contractor is responsible for any drilling performed by the temporary licensee until the notice of termination is received by the division. The notice of termination must explain the reasons for terminating the employment of the temporary licensee. The temporary license expires upon receipt of the notice by the division.

**NAC 534.298 Temporary license: Period of validity; authorized activities; transferability.** A temporary well-drilling license:

1. Is valid until the next scheduled examination administered by the board;
2. Authorizes well drilling to be performed only for the contractor who requested the license; and
3. Is not transferable.

## DUTIES OF WELL DRILLERS

**NAC 534.300 Designated basins; replacement wells. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in NAC 534.315, a well driller shall not drill a water well within a ground water basin designated by the state engineer until the well driller determines that a permit to appropriate the ground water has been issued pursuant to NRS 534.050.

***2.*** A water well may be drilled to replace an existing well if ~~[the existing well cannot be reconditioned and it will no longer produce the quantity of water allowed by the permit. A]~~ ***a valid*** permit, waiver or certificate of water right ~~[must exist]~~ ***exists*** for the well to be replaced.

***3. The existing well must be plugged at the time the replacement well is drilled. If continued use will be made of the existing well, an additional permit or waiver must be issued for the replacement well before any drilling is commenced.***

***4. The replacement well must not be drilled more than 300 feet from the location of the existing point of diversion described in the permit and may not be moved outside of the 40-acre subdivision described in the permit, waiver or certificate.*** ~~[The replacement well must not be drilled more than 300 feet from the location of the existing well described in the permit and may not be moved outside of the 40-acre subdivision described in the permit, waiver or certificate The existing well must be plugged at the time the replacement well is drilled. If continued use will be made of the existing well, a permit or waiver must be issued for the replacement well before any drilling is commenced.]~~

**NAC 534.310 Nondesignated basins. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in NAC 534.315:

(a) In basins which have not been designated by the state engineer, a person who drills a well before receiving a permit to appropriate water does so at the risk that a permit to appropriate water cannot be obtained; and

(b) A person shall not use water from a well until a permit or waiver has been obtained pursuant to NRS 534.050.

2. In basins which have not been designated by the state engineer, the well driller may proceed to drill and perform tests on a well whether or not the owner of the property has a permit to appropriate water. The well driller shall submit to the state engineer a notice of intent to drill and a log and record of work as prescribed in ***NAC 534.320 and*** NAC 534.340.

3. In basins which have not been designated by the state engineer, a waiver is required for any water well:

(a) That does not comply with the requirements for construction prescribed in this chapter; ~~[or]~~

(b) The water appropriated from which will be used in constructing a highway or exploring for oil, gas, minerals or geothermal resources~~[.]~~ ***; or***

***(c) That may be used for monitoring.***

**NAC 534.315 Domestic wells. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in subsection 8, permits to appropriate ground water are not required for the drilling of domestic wells.

2. A well driller shall take into account the normal annual fluctuations in the demand for water of an area and, if the well is in a developed area, some annual drop in static water level.

3. Water may not be diverted from more than one well for domestic use in one single-family residence.

4. A well drilled for domestic use only must have a casing size not larger than 8.625 inches in diameter.

5. If a domestic well cannot be reconditioned, a replacement may be drilled if the original well is plugged as required by NAC 534.420 ***before the well drilling equipment is moved from the drilling site*** ~~[as soon as practicable after the new well is drilled]~~.

6. Except as otherwise provided in subsection 7, a well may be drilled for domestic use if not more than 1,800 gallons of water per day are diverted from the well for use by a single-family household, including a residence with a lawn, garden and domestic animals.

7. If water service is available from an entity such as a public utility, a water district or a municipality presently engaged in furnishing water to the inhabitants of the area, a domestic well may not be drilled, deepened, reconditioned or replaced ***without first obtaining a waiver from the division***.

8. A permit must be obtained from the division if:

(a) More than 1,800 gallons of water per day are diverted from a water well; or

(b) Water is diverted from the well for more than one single-family dwelling.

***(c) Water is used for non-domestic purposes.***

***9. An existing domestic well must be plugged in accordance with NAC 534.420 if the domestic unit is receiving water service from an entity such as a public utility, a water district or a municipality presently engaged in furnishing water to the inhabitants of the area.***

**NAC 534.320 Notice of intent to drill: Contents; submission. (**NRS 534.020**,** 534.110**)**

1. A driller shall notify the division before drilling, reconditioning or plugging a well by submitting a notice of intent to drill. The notice must be submitted for work on an exploratory, water or monitoring well. A well driller shall notify the division before drilling a geothermal well if a permit to appropriate water is required pursuant to NRS 534.050.

2. The notice must give the name of the person for whom the work is being performed, the location of the well by ***public land survey*** ~~[public survey]~~, the lot number, block number and county assessor's parcel number, the purpose of the well, ***the permit or waiver number,*** the date on which the work is to be commenced, the type of work to be done and the diameter of casing to be installed. The notice must ***include the license number and signature of the licensed well driller responsible for the work*** ~~[be signed by the well driller or contractor, and the license number of the driller who will be at the site and responsible for the work must be included]~~.

3. The well driller shall submit to the division a notice of intent to drill. The notice must be received by the division at least ***three (3)*** ~~[3]~~ working days before the well rig is to be set up and the drilling commenced. If a permit or waiver is required for the drilling operation, the number of the permit or waiver issued by the division must be indicated on the notice of intent to drill in addition to the information required by subsection 2.

***4. If any of the information required to be included by regulation is omitted from the notice of intent, the division may return the notice of intent for correction. No well drilling activity may commence until the Division approves the notice of intent.***

***5.*** ~~[4.]~~ The forms evidencing notice of intent to drill will be furnished by the division to the driller on request and will be stamped and self-addressed.

***6. The Division may allow submission of the notice of intent in an electronic format that is in accordance with the form pursuant to NRS 534.320, so long as the Division has approved electronic submittal for the licensed well driller.***

***7.*** ~~[5.]~~ If a well is to be drilled in a township that is located north of the Mount Diablo baseline, the notice of intent to drill must be submitted to the office of the division located in Carson City. If a well is to be drilled in a township which is located south of the Mount Diablo baseline, the notice of intent to drill must be submitted to the office of the division located in Las Vegas.

**NAC 534.325 Notice of intent to drill: Lapse; submission of new notice. (**NRS 534.020**,** 534.110**)**

1. If the well described on a notice of intent to drill is not drilled within 60 days after the division receives the notice, the notice lapses and a new notice must be submitted before the well is drilled. The new notice must include the number of the lapsed notice.

2. The well driller may set up the drill rig and commence drilling ***3 working days*** ~~[immediately]~~ after the division receives the new notice.

3. The well driller shall indicate on the record of work for the well the number of the notice of intent to drill that the driller last submitted for that well.

**NAC 534.330 Responsibilities of licensed well driller at drilling site. (**NRS 534.020**,** 534.110**)** A well driller licensed by the state engineer:

1. Must be present at the well-drilling site when the drilling rig is in operation ***and during any activity involving the construction or abandonment of a well and any activity involving the operation of related drilling equipment***. If the licensed well driller leaves the drilling site, the drilling operation must be shut down until the driller or another well driller licensed pursuant to this chapter returns to the site.

2. Shall ensure that the drilling of the well complies with:

(a) The provisions of this chapter;

(b) The terms and conditions of any permit, waiver or order issued by the state engineer; and

(c) The requirements of all other federal, state and local agencies which have jurisdiction over the land on which the well is to be drilled.

3. Shall carry his license card when he is present at the drilling site and produce the card when requested to do so by a representative of the division.

**NAC 534.340 Log and record of work: Form; contents. (**NRS 534.020**,** 534.110**)**

1. A log and record of work submitted by a well driller pursuant to NRS 534.170 must be typewritten or legibly handwritten in black ink.

2. In addition to the information required pursuant to NRS 534.170, the following information must be contained in the record of work:

(a) The complete name and address of the person for whom the work is being performed.

(b) The location of the well, including:

(1) A description of its location by ***public land survey*** ~~[public survey]~~ and county assessor's parcel number.

***(2) Global Positioning System(GPS) coordinates taken in either the Latitude/Longitude or Universal Transverse Mercator(UTM) coordinate system. Coordinates taken in Latitude/Longitude shall be in either the DDD° MM' SS.S" or DDD.DDDDD° format. It shall be specified for all coordinates whether the North American Datum of 1927 (NAD 27) or the North American Datum of 1983 (NAD 83)/World Geodetic System of 1984 (WGS 84) was used.***

***(3)*** ~~[(2)]~~ In a record of work for a domestic well, the address of the house to be served by the well, the lot and block description and the name of the subdivision.

(3) If applicable, the waiver number or permit number.

(c) If possible, the pressure head of the well and any pumping test or development data.

(d) An accurate identification of the water-bearing formations.

(e) If the static water level is measured from the top of the casing, the elevation of the top of the casing above the land surface.

3. An accurate description of the perforations in the casing must be set forth in the section of the record of work that contains a record of the well casing.

4. If the well driller does not have a thermometer, the temperature of the water may be described in the record of work as cold, warm or hot.

5. The flow from a well which flows or is pumped may be determined for the purpose of the record of work by measuring the length of time it takes to fill a container of known capacity if the flow is not too large to be measured in that manner.

6. As used in this section, "pumping test" means a test of a well conducted by pumping a specified amount or continuous flow of water from a well to determine the characteristics of the well or an aquifer.

**NAC 534.345 Record of work: Completion; return for correction. (**NRS 534.020**,** 534.110**)**

1. All work performed by the well driller during the drilling operation must be accurately described in the record of work submitted by the well driller pursuant to NRS 534.170 and NAC 534.340.

***2. The completed well log form shall be signed by the licensed on-site well driller or the responsible well drilling contractor.***

***3. The Division may allow submission of the well log report in an electronic format that is in accordance with the form pursuant to NRS 534.170 and NAC 534.340 so long as the Division has approved electronic submittal for the licensed well driller.***

***4.*** ~~[(2)]~~ If any of the information required to be included by regulation or statute is omitted from the record of work, the division will return the record of work for correction. ***Corrections must be made within 30 days from the date of return. Any record of work submitted after the 30 days has expired will be deemed late and demerits will be assessed accordingly. If the corrections have not been submitted after 90 days from the date of return the well driller will be in violation for failure to submit a record of work and demerits will be assessed***

***accordingly. If corrections are submitted after 90 days from the date of return, the Division will accept the record of work, however, the violation will remain in force.***

**NAC 534.350 Identification of well rig. (**NRS 534.020**,** 534.110**)** The name and address of the contractor drilling the well must be conspicuously displayed in legible letters at least 3 inches high on the drill rig operated or owned by that contractor. The identification must be displayed on the rig before the rig is positioned at the drill site.

**NAC 534.355 Reporting of unauthorized activities. (**NRS 534.020**,** 534.110**)** A licensed well driller who becomes aware of specific information relating to improper construction or the abandonment of a well shall report that information to the division as soon as practicable.

**DRILLING, CONSTRUCTION AND PLUGGING OF WELLS AND BOREHOLES**

**NAC 534.360 Construction of well: Casing. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in subsection 2, all wells must be cased to the bottom of the well bore and constructed to prevent contamination or waste of the ground water.

2. If no additional water is developed in the bottom portion of a well, neat cement, cement grout or concrete grout must be placed by tremie pipe in an upward direction from the bottom of the well to the bottom of the casing.

3. The casing must:

(a) Except as otherwise provided in this paragraph and NAC 534.362, be of new steel or clean and sanitary used steel. Materials other than steel may be used if the design of the well or the subsurface conditions prevent the use of steel casing and a professional engineer who holds a certificate of registration issued pursuant to chapter 625 of NRS has approved the casing materials.

(b) Be free of pits and breaks.

(c) Conform to the following minimum specifications, allowing for mill tolerance:

(1) If the conductor casing is 50 feet or less in depth, the thickness of the wall must be:

(I) At least 0.141 or 9/64 of an inch if the wall is made of a material other than galvanized steel pipe that has been corrugated; or

(II) At least 0.109 or 7/64 of an inch if the wall is made of galvanized steel pipe that has been corrugated.

(2) If the depth of the conductor casing exceeds 50 feet, and for all production or intermediate casing, the wall must be sufficiently thick to conform to the casing sizes listed in sub-subparagraphs (I) to (IV), inclusive:

(I) If the casing is smaller than 10 inches nominal size, the wall must be at least 0.188 or 3/16 of an inch thick.

(II) For 10-, 12-, 14- and 16-inch nominal size casing, the wall must be at least 0.250 or 1/4 of an inch thick.

(III) For 18- and 20-inch nominal size casing, the wall must be at least 0.312 or 5/16 of an inch thick.

(IV) For casing larger than 20 inches nominal size, the wall must be at least 0.375 or 3/8 of an inch thick.

***4. The state engineer will not waive the requirements set forth in paragraph (c) of subsection 3 of NAC 534.360.***

***5.*** ~~[4]~~**.** The top of the casing on all wells must be at least 12 inches above the surface of the ground or the finished grade.

***6.*** ~~[5]~~**.** All production casing joints must be threaded and coupled or welded and be watertight. If the casing joints are welded, each joint must be welded completely. Spot welds of casing joints are prohibited.

***7.*** ~~[6]~~**.** The well driller shall ensure that the integrity of any casing to be used in the construction of the well has not been impaired by storage, shipping, handling or exposure to ultraviolet light.

**NAC 534.362 Construction of well: Thermoplastic casing. (**NRS 534.020**,** 534.110**)**

1. New thermoplastic water well casing made of polyvinyl chloride may be used as casing in a well if the casing:

(a) Is clearly marked as well casing; and

(b) Complies with the standards adopted by the American Society for Testing and Materials, designated as ASTM F-480, which are hereby incorporated by reference. A copy of the standards may be obtained from ***ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959 USA Phone: (610) 832-9585 Fax: (610) 832-9555*** ~~[The American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103]~~, at a cost of ***$47.50 by mail delivery or may be obtained from the ASTM internet web page at http://www.astm.org in PDF format at a cost of $44.*** ~~[$23 if prepaid, or $24.61 if not prepaid.]~~

***2. If polyvinyl chloride well casing is used, the wall thickness must be specified as follows:***

***For nominal diameters of six (6) inches or less, the minimum wall thickness for thermoplastic well casing shall conform to a Schedule rating of Schedule 40 or heavier. For example, nominal pipe size of 6 inch rated schedule 40 has a wall thickness = 0.280 inches. The ASTM Standard Dimension Ratio (SDR) that would exceed this standard is SDR 21 or heavier. SDR 26 would not meet this standard.***

***For nominal diameters of greater than six (6) inches, the minimum wall thickness for thermoplastic well casing shall conform to the ASTM Standard Dimension Ratio (SDR) = 21 or heavier. For example, nominal pipe size of 8 inch with an SDR 21 has a wall thickness = 0.410 inches. Eight (8) inch, Schedule 40 with a wall thickness = 0.322 inches would not meet the standard for Nevada.***

In all cases, the differential pressures that may occur during the installation of casing, well development and operation of the well must be considered by the well driller and the person responsible for designing the well.

2. If polyvinyl chloride casing is used, the joint connections must be:

(a) Flush-threaded;

(b) Threaded and coupled; or

(c) Joined with nonmetallic couplings that are sealed with elastomeric sealing gaskets and which consist of flexible thermoplastic splines that are inserted into precisely machined grooves in the casing.

The joint connections must not be glued or joined by restraining devices that clamp into or otherwise damage the surface of the casing. If the joint connections are flush-threaded or threaded and coupled, the well driller shall ensure that the connections are not over-tightened.

3. If polyvinyl chloride casing is used in a water well or monitoring well, the well driller shall set a protective steel casing which complies with the provisions of NAC 534.360 and extends not less than 5 feet inside the sanitary seal and not less than 1 foot above the finished grade. The top of the protective casing must be fitted with a locking cap or a standard sanitary well cap.

**NAC 534.370 Construction of well: Prevention of contamination; securing against unauthorized entry; suspension of drilling. (**NRS 534.020**,** 534.110**)**

1. The driller shall take the precautions necessary to:

(a) Seal off any known zones of poor quality water which may affect the zones of good quality water in the well.

(b) Prevent contamination or waste of ground water.

2. Any additive used in drilling a well must be safe and must not contaminate or induce contamination of the ground water.

3. If it becomes necessary for the driller to discontinue the drilling operation before completion of the well, the well must be covered securely to prevent a contaminant from entering the casing or borehole and rendered secure against entry by children, domestic animals and wildlife.

4. After drilling is completed, all openings must be closed off to prevent contamination of the well. A sanitary well cap or welded plate must be welded to the well.

5. If drilling is suspended for any reason, the division must be notified within 24 hours after drilling is suspended or before the drilling equipment is moved from the drilling site, whichever occurs first. The suspension of drilling without completing or plugging the well must be approved by the division.

**NAC 534.375 Construction of well: Measures required if contaminant or contaminated water is encountered. (**NRS 534.020**,** 534.110**)** If a contaminant or contaminated water is encountered during the construction of a well, the strata which contain the contaminant or contaminated water must be cased or sealed in such a manner that the contaminant or contaminated water does not commingle with or impair other strata or the water contained in other strata. The well driller shall, by grouting or by using special seals or packers, prevent the movement of the contaminant or contaminated water in the well bore.

**NAC 534.378 Construction of well: Measures required if artesian condition is encountered. (**NRS 534.020**,** 534.110**)**

1. If an artesian condition is encountered in a well, the well driller shall, in addition to complying with the provisions of subsections 2 and 3 of NRS 534.060, ensure that unperforated casing extends through the confining strata above the artesian zone. The annular space between the casing and the walls of the well bore must be sealed by placing neat cement, cement grout or bentonite grout, that consists of not less than 30 percent bentonite, by tremie pipe in an upward

direction from the top of the artesian zone to the level necessary to prevent the leakage of artesian water above or below the surface.

2. Any flow of artesian water must be stopped completely ***by providing the necessary valves, plugs or other appliances to prevent or control the flow of water from the well and prevent the loss of underground water above or below the ground surface*** before the drill rig is removed from the drill site.

***CONSTRUCTION OF WELL: CASING PERFORATIONS OR WELL SCREEN***

***1. The number, size, type and distribution of perforations are optional, except that no perforations may be made in a pipe tapping confined (artesian) water above the confining impervious materials.***

***2. Perforated well casing or well screen, whether steel or polyvinyl chloride, shall be factory machined or commercially manufactured.***

**NAC 534.380 Construction of well: Seals. (**NRS 534.020**,** 534.110**)**

1. Before the drill rig is removed from the drill site of a well, the annular space between the well bore and the casing must be sealed ***to a minimum depth of fifty (50) feet below ground level*** by:

(a) Placing neat cement, cement grout, concrete grout or bentonite grout, which consists of not less than 30 percent bentonite, from the sealing depth to 10 feet from the surface; and

(b) Placing neat cement, cement grout or concrete grout from 10 feet below the surface to the surface.

2. The casing must be centered as nearly as practicable in the well bore to allow the sanitary seal to surround the casing.

3. If a temporary conductor casing is used, it must be withdrawn during the placement of the grout.

4. If a pitless adapter is used in domestic or small commercial wells:

(a) The sanitary seal must begin not more than 5 feet below ground level;

(b) The sanitary seal must extend at least 50 feet below ground level; and

(c) The portion of the casing above the sanitary seal must be backfilled to ground level with uncontaminated soil which is compacted.

5. A pipe used to feed gravel through the cement seal or to provide access to the interior of the well must be fitted with a watertight cap.

6. A licensed driller must place the seal or directly supervise the placement of the seal.

7. The seal must be placed:

(a) In the annular space within 3 days after the casing is set and before the drill rig is removed from the drill site.

(b) In one continuous mass ***from the minimum depth of 50 feet below ground level to surface*** ~~[or completed within 24 hours]~~.

(c) By tremie pipe in an upward direction to displace the fluid to the surface of the ground, if any fluid is standing in the well bore above the sealing depth.

8. The diameter of the well bore must be at least 4 inches larger than the ***largest*** diameter of the outside of the outermost casing to be used ***including any joints or collars***. If a fill pipe for gravel is installed, the diameter of the well bore must be 4 inches larger than the ***largest*** diameter

of the casing plus the ***largest*** diameter of the fill pipe for gravel. A fill pipe for gravel or any other pipe to provide access to the interior of the well must be completely surrounded by the seal. A conductor casing may be used to convey the gravel pack. If a conductor casing is used:

(a) The diameter of the well bore must be at least 4 inches larger than the ***largest*** diameter of the conductor casing; and

(b) The annular space between the conductor casing and the well bore must be sealed.

9. A watertight seal must be installed at the surface level between the conductor casing and the production casing to prevent any contaminants from entering the gravel pack conductor area. A welded plate or concrete seal must be used. If a welded plate is used, the entire length of the plate must be welded to the conductor casing and production casing.

**NAC 534.390 Construction of well: Location near river, lake, perennial stream, unlined reservoir or unlined canal; compliance with permit or waiver. (**NRS 534.020**,** 534.110**)**

1. If a well, other than a monitoring well, is drilled within 1/4 mile of a river, lake, perennial stream, unlined reservoir or unlined canal:

(a) Perforations in the production casing are prohibited from ground level to a depth of 100 feet.

(b) The well must be sealed to a depth of 100 feet.

(c) A permanent conductor casing may be used to convey the gravel pack to the 100-foot level.

2. If a well is being drilled pursuant to a permit or waiver, the well driller is responsible for satisfying the terms and conditions of the permit or waiver concerning the construction of the well.

**NAC 534.420 Plugging of well: General requirements. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in NAC 534.422, wells must be plugged in the manner prescribed in this section by a driller licensed by the state engineer.

2. A driller shall:

(a) Ensure that a notice of his intent to plug a water well is received by the division not less than 3 working days before the drill rig is moved to the location where the well will be plugged; and

(b) Notify the division not less than 24 hours before he begins to plug the well.

3. Before the driller begins to plug the well, he shall, if possible, obtain the log and record of work for that well from the division or the owner of the well.

4. On abandonment or order of the state engineer, a water well must be plugged by:

(a) Removing the pump or debris from the well bore with appropriate equipment; and

(b) If an annular cement seal was not installed, breaking the casing free with appropriate equipment so that the casing may be pulled from the well.

5. If the casing in the well:

(a) Breaks free, the driller shall plug the borehole in the manner prescribed in NAC 534.4371 as the casing is pulled from the well or after the casing is removed from the well if the borehole remains intact. The well must be plugged from the total depth of the well to the surface of the well, in stages if necessary, to displace in an upward direction any fluid or debris in the well.

(b) Does not break free, the driller shall perforate that portion of the casing which extends from the bottom of the well to not less than 50 feet above the top of the uppermost saturated ground water stratum. That portion of the casing must be perforated not less than four times per ~~[linear foot]~~ ***two lineal feet*** to allow the plugging fluid to penetrate the annular space and the

geologic formation. The perforations made in each ~~[linear foot]~~ ***two lineal feet*** of the casing must be made along a horizontal plane of the well bore. ~~[The angle between any two consecutive perforations made on a horizontal plane must not exceed 90 degrees, as measured from the center of the well bore.]~~ A well with a diameter of more than 8 inches in nominal size must be perforated a sufficient number of additional times per linear foot to ensure that the plugging fluid penetrates into the annular space and formation. The well driller shall then plug the well from the total depth of the well to 50 feet above the uppermost saturated ground water stratum or to within 20 feet of the surface of the well, whichever is less, with neat cement or bentonite grout specifically designed to plug abandoned wells. ***If the neat cement or bentonite grout material is not brought to within 20 feet of the surface, and after sufficient time has passed for this bottom plug to set up, the depth of the top of this lower plug shall be verified by measurement with appropriate equipment. The well driller shall continue to install neat cement or bentonite grout until the top of this bottom plug remains at least 50 feet above the top of the uppermost saturated stratum. The well driller shall then install uncontaminated fill material or other plugging materials described in NAC 534.4371(2)(b) from the top of the bottom plug to within 20 feet of the surface.***

6. The well driller shall place a surface plug in the well consisting of neat cement, cement grout or concrete grout, from a depth of at least 20 feet to the surface.

7. If the well casing does not break free and there is no evidence of a sanitary seal around the well casing, the driller shall, in addition to the requirements of subsection 5, perforate the upper 50 feet of casing before setting the surface plug. The casing must have at least four perforations per linear foot of casing and the surface plug must consist of neat cement ***and must extend from 50 feet below ground level to surface***.

8. A well driller shall submit a ***log and record of work*** ~~[written report]~~ to the division within 30 days after a water well has been plugged. The report must contain the location of the well by ***public land survey*** ~~[public survey]~~ and county assessor's parcel number, the name of the owner of the well, the condition of the well, the static water level before plugging and a detailed description of the method of plugging, including, but not limited to:

(a) The depth of the well;

(b) The depth to which the materials used to plug the well were placed;

(c) The type, size and location of the perforations which were made in the casing;

(d) The debris encountered in, milled out of or retrieved from the well; and

(e) The materials used to plug the well.

9. If there is any standing liquid in the interval of the well bore that is being plugged, all grout materials used pursuant to this section must be placed by tremie pipe in an upward direction.

**NAC 534.422 Plugging of well: Use of exceptional method. (**NRS 534.020**,** 534.110**)**

1. A well driller who wishes to plug a well in a manner that does not comply with the provisions set forth in NAC 534.420 must request approval from the division.

2. If the division authorizes the well driller to plug the well in a manner other than the manner set forth in NAC 534.420, the well driller shall comply with the instructions he receives from the division, if any, relating to the manner in which the well must be plugged.

***3. A contractor with a valid license from the state contractor's board, or a person qualified by the state engineer to plug wells, may request and obtain a waiver of the requirement to have a well driller license to plug wells as required in NAC 534.420.***

***The contractor or other qualified person is responsible for compliance with the provisions of NAC 534.420 and NAC 534.422.***

***4. The contractor or other qualified person shall provide the state engineer sufficient information that demonstrates the person's ability to comply with the provisions of NAC 534.420.***

**NAC 534.424 Plugging of well: Responsibility for cost. (**NRS 534.020**,** 534.110**)**

1. If a well is located on private land, the owner of the land at the time the well is plugged is responsible for the cost of plugging the well.

2. If a well is located on public land, the person who last drilled or used the well is responsible for the cost of plugging the well. If the person who last drilled or used the well does not plug the well ~~[within 1 year]~~ after receiving notice from the division by certified mail, return receipt requested, that the well must be plugged, the person who owns the land on which the well is located must plug the well.

**NAC 534.427 Mandatory plugging of certain wells. (**NRS 534.020**,** 534.110**)**

1. If any type of permit, waiver or application to appropriate water from a water well is canceled, abrogated, forfeited, withdrawn or denied, the well must be plugged in the manner prescribed in NAC 534.420.

2. A well, other than a water well drilled for a domestic purpose, for which a permit or waiver has not been issued must also be plugged in the manner prescribed in NAC 534.420.

***3. A well must also be plugged in the manner prescribed in NAC 534.420 if the division makes findings that any well:***

***(a) Tends to impair existing rights or the safety and welfare of the citizens of the state;***

***(b) Where the mechanical integrity of the well construction has failed or is unknown;***

***(c) Was not drilled in compliance with this regulation;***

***(d) Was not drilled in compliance with the provisions of NRS Chapter 534;***

***(e) Tends to cause contamination of the groundwater aquifer;***

***(f) Where there is no evidence of impending use of the well for any legal purpose or where no legal use of water is allowed;***

***(g) Tends to cause a waste of water above or below the surface;***

***(h) Is in any manner defective as determined by the state engineer.***

***(i) Located in a non-designated basin where there is no reasonable expectation of obtaining a water right permit or waiver.***

***PROCEDURE BY WHICH THE STATE ENGINEER MAY APPROVE A WAIVER FROM THE REQUIREMENT OF PLUGGING A WELL***

***5. The owner of a well may request that the state engineer grant a waiver from the requirement of plugging a well pursuant to NRS 534.060 (7) and (8).***

***6. The request must be in writing and must include information and evidence deemed sufficient by the state engineer that the well is not in any manner defective as set forth in, but not limited to the provisions of NAC 534.427(3) or NRS 534.060.***

**NAC 534.430 Access port or removable well cap required. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in subsection 3, each well that is drilled, deepened or reconditioned must have:

(a) An access port near the top of the casing that is not less than 1 inch in diameter; or

(b) A commercially manufactured sanitary well cap that may be easily removed to determine the level of water in the well.

2. An access port must have a watertight, screw-type cap seal to prevent contamination and must be kept closed.

3. On wells that are 8 inches in diameter or smaller, the access may be a 1/2-inch hole at the top of the casing or in the casing cover with a removable plug or bolt.

4. As used in this section, "access port" means an opening in the top of a well casing in the form of a tapped hole and plug or a capped pipe welded on the casing to permit entry of a device to measure the water level of the well.

**NAC 534.432 Noncompliance with requirements for well drilling. (**NRS 534.020**,** 534.110**)** If a well was:

1. Constructed by a person who, at the time the well was constructed, was not the holder of a well-drilling license issued pursuant to NRS 534.140; or

2. Not constructed or completed in compliance with the provisions of this chapter as determined by the state engineer, the well must be abandoned and plugged in the manner prescribed in NAC 534.420 ***at the expense of the responsible party in sections 1 or 2***.

**NAC 534.4351 Monitoring wells: Restrictions on construction; submission of plat map and record of work. (**NRS 534.020**,** 534.110**)**

1. A monitoring well must be:

(a) Drilled only by a well driller who is licensed by the state engineer;

(b) Constructed in accordance with the provisions of this chapter, except for any provision that is waived by the state engineer; and

(c) Drilled only for the purpose of complying with federal, state or local environmental requirements or any other federal, state or local requirements.

2. A plat map showing the actual location of the monitoring well***, a vicinity map*** and a record of work which contains the information described in NRS 534.170 and NAC 534.340 must be submitted within 30 days after completion of the well by the person who is responsible for the well. The plat map must indicate the distance of the well from permanent reference points, including streets, roads or section lines. The map must be drawn on paper measuring 8 1/2 inches by 11 inches or 11 inches by 17 inches.

**NAC 534.4353 Monitoring wells: Responsibilities of owner; permits; affidavit of responsibility for plugging. (**NRS 534.020**,** 534.110**)**

1. The owner of a monitoring well shall ensure that the well:

(a) Does not cause contamination of ground water during its use; and

(b) Is plugged upon abandonment.

2. A permit to appropriate water or a waiver from the state engineer is not required to drill and collect data from a monitoring well unless the well is not constructed in the manner prescribed in this chapter.

3. The well driller shall, when he submits the notice of intent to drill pursuant to NAC 534.320, submit to the division a notarized affidavit on a form prescribed by the division which

is signed by the person who will be responsible for plugging the well and states that he will be responsible for plugging the well when it is abandoned. The division shall prescribe the form required pursuant to this subsection and make copies of the form available upon request.

4. The owner of a monitoring well shall notify the division in writing as soon as practicable after determining that the well will no longer be used.

5. If a monitoring well or any other well is to be used to remove a contaminant from ground water, a permit to appropriate water for environmental purposes must be obtained from the state engineer pursuant to the provisions of NRS 533.437 to 533.4377, inclusive.

**NAC 534.4355 Monitoring wells: Casing; prevention of contamination. (NRS 534.020, 534.110)**

1. A well driller shall install casing in a monitoring well. If polyvinyl chloride casing is used, it must comply with the standards adopted by the American Society for Testing and Materials, designated as ASTM F-480.

2. The well driller shall take the precautions necessary to prevent contamination of ground water. The equipment used to construct a monitoring well must be decontaminated before the construction of the well is commenced.

3. The diameter of the casing must not exceed 4 inches in nominal size.

4. The connections of the casing must comply with the provisions of NAC 534.360 or 534.362. The connections must be made watertight by wrapping them with teflon tape, placing a ring or gasket between them or by any other method which will not introduce contaminants into the well.

5. Both ends of the casing must be capped.

6. The perforations must be of a width and length which will allow the strata to be observed while not permitting the infiltration of the gravel pack through the casing or allowing the contaminants or water from separate strata to commingle.

7. To ensure adequate space for the gravel pack and seals, the well bore of a monitoring well must, for the entire length of the casing placed in the well, be not less than 4 inches larger than the diameter of the casing.

8. Not more than one perforated or screened section of casing may be placed in the well bore of a monitoring well unless the vertical intervals of the well bore in between the screened sections are sealed with neat cement, cement grout, bentonite grout or fully hydrated sodium bentonite tablets or chips.

9. Not more than one casing may be placed in the well bore of a monitoring well unless the vertical intervals of the well bore in between the screened sections of the casings are sealed with neat cement, cement grout, bentonite grout or fully hydrated sodium bentonite tablets or chips.

10. Monitoring wells must be drilled an adequate distance from each other to ensure that there is no commingling of the contaminants or ground water encountered in the wells.

**NAC 534.4357 Monitoring wells: Placement of gravel and seals in annular space. (**NRS 534.020**,** 534.110**)**

1. If the water or vapors which are being monitored in a monitoring well are not encountered within 5 feet below the surface of the ground, the well driller shall place in the annular space of the well:

(a) From the bottom of the well to 2 feet above the uppermost perforation in the casing, a gravel pack which consists of quartz sand, silica or other materials which will not contaminate the ground water or the geologic formation;

(b) From the gravel pack placed pursuant to paragraph (a) to 2 feet above that gravel pack, a seal consisting of fully hydrated sodium bentonite pellets or bentonite grout; and

(c) From the seal placed pursuant to paragraph (b) to the surface, a seal consisting of cement grout, neat cement, concrete or bentonite grout.

2. If the water or vapors which are being monitored in a monitoring well are encountered within 5 feet below the surface of the ground, the well driller shall comply with the requirements of subsection 1, except that:

(a) The gravel pack required pursuant to paragraph (a) of subsection 1 must extend only 6 inches above the uppermost perforation in the casing; and

(b) The surface seal required pursuant to paragraph (c) of subsection 1 must be placed from 1 foot below the surface to the surface.

3. The well driller shall ensure that a bridge does not occur in the annular space during the placement of the gravel pack and seals required pursuant to this section.

4. If more than 20 continuous feet of grout are placed in the annular space of the well or if there is standing liquid in the well bore above the sealing depth, the grout must be placed by tremie pipe in an upward direction.

**NAC 534.4359 Monitoring wells: Measures required if contaminant or contaminated water is encountered. (**NRS 534.020**,** 534.110**)** If a contaminant or contaminated water is encountered during the construction of a monitoring well, the strata which contain the contaminant or contaminated water must be cased and sealed in such a manner that the contaminant or contaminated water does not commingle with or impair other strata or the water contained in other strata. The well driller shall seal the strata by grouting or by using special seals or packers, if necessary, to prevent the movement of the contaminants or contaminated water in the well bore.

**NAC 534.4361 Monitoring wells: Surface pad; prevention of unauthorized use; additional protective measures. (**NRS 534.020**,** 534.110**)**

1. Unless the area surrounding a monitoring well is paved with concrete or asphalt, a surface pad must be installed around the casing at the surface.

2. A threaded or flanged cap or compression seal must be installed to prevent unauthorized use of the well. If the top of the well is flush with the surface and the well protector required pursuant to subsection 3 is of a type which may not be locked, the cap or seal must be of a type which may be locked.

3. The well must also be protected and secured by:

(a) If it is not necessary for the well to be flush with the surface:

(1) Setting a steel surface casing which complies with the requirements set forth in NAC 534.360 and extends not less than 5 feet below the surface pad and not less than 1 foot above the surface pad;

(2) Fitting the top of the steel casing with a locking cap; and

(3) Clearly marking the well as a monitoring well; or

(b) If it is necessary for the well to be flush with the surface:

(1) Placing a well protector capable of supporting vehicular travel which extends one-half inch above the surface pad or concrete or asphalt paving; and

(2) Clearly marking the well as a monitoring well.

4. As used in this section, “surface pad” means a formation of concrete or cement grout with a diameter of not less than 1 foot and a thickness of not less than 3 1/2 inches which is set around a monitoring well at a slope to ensure that water flows away from the well.

**NAC 534.4363 Monitoring wells: Artesian conditions. (**NRS 534.020**,** 534.110**)** If an artesian condition is encountered in a monitoring well, the well driller shall ensure that the well is sealed in the manner prescribed in NAC 534.378.

**NAC 534.4365 Monitoring wells: Plugging. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in this section, a monitoring well must be plugged ~~[in the manner prescribed in NAC 534.420]~~ within ~~[3]~~ ***30*** days after ***monitoring is no longer required*** ~~[it is abandoned]~~.

2. Except as otherwise provided in subsections 3 and 4, a monitoring well ***must*** [may] be plugged by:

(a) Placing neat cement or a high-solids bentonite grout, which consists of not less than 20 percent bentonite, by tremie pipe in an upward direction from the bottom of the well to the surface; or

~~[(b) Placing sodium bentonite pellets or granules or bentonite grout from the bottom of the well to 20 feet below the surface and placing neat cement from 20 feet below the surface to the surface. Sodium bentonite pellets or granules may not be placed in more than 100 feet of standing liquid unless the pellets or granules have been coated by the manufacturer to delay hydration]~~.

3. ***If t***~~[T]~~he casing in the monitoring well ***can*** ~~[must]~~ be removed from the well bore ***,*** ~~[if]~~

~~[(a) The soil or water in the well is contaminated;~~

~~(b) The well was not constructed pursuant to the provisions of this chapter; or~~

~~(c) The well was constructed by a person who is not a licensed well driller.~~

~~Except as otherwise provided in subsection 4,]~~ ***and after removing or perforating the bottom end cap,*** neat cement or high-solids bentonite grout must be placed by tremie pipe in an upward direction from the bottom of the well to the surface as the casing is removed from the well bore.

4. If the integrity of the borehole remains intact as the casing is removed from the well bore, the well may be plugged as provided in NAC 534.4371.

**NAC 534.4367 Drive point wells. (**NRS 534.020**,** 534.110**)**

1. A well driller may construct a drive point well without placing in the annular space of the well the gravel pack and seals required pursuant to NAC 534.4357.

2. The diameter of the casing used in a drive point well which is not constructed pursuant to the provisions of NAC 534.4357 must not be larger than 2 inches in nominal size.

3. A drive point well which is not constructed pursuant to the provisions of NAC 534.4357 must be abandoned within 60 days after the well is constructed. Upon abandonment, the casing must be removed from the well bore and the well bore must be plugged in the manner provided in NAC 534.4371.

**NAC 534.4369 Boreholes: Generally. (**NRS 534.020**,** 534.110**)**

1. A borehole may be drilled or plugged by a person who is not a licensed well driller.

2. A person who constructs ***or plugs*** a borehole is not required to file with the division a notice of intent ~~[to drill or plug the borehole]~~.

3. A borehole may be drilled without obtaining from the division a permit to appropriate water or a waiver of the requirement to obtain such a permit.

4. A person who drills or plugs a borehole, the operator of the exploration project or the owner of the land where the borehole is located must maintain a record of the drilling operation which includes:

(a) The dates on which the borehole is constructed and plugged;

(b) The location of the borehole as shown by ***public land survey*** ~~[public survey]~~;

(c) The depth and diameter of the borehole;

(d) The depth at which ground water is encountered in the borehole; and

(e) The methods and materials used to plug the borehole.

5. The state engineer may, at any time, require the person drilling or plugging the borehole, the operator of the exploration project or the owner of the land on which the borehole is located to submit to the state engineer a copy of the record required pursuant to subsection 4 and any other information relating to the construction, operation or plugging of the borehole that the state engineer determines is necessary.

6. The owner and the lessor of the land on which a borehole is located, the operator of the exploration project and the drilling or plugging contractor for the project shall ensure that the ground water is uncontaminated during the drilling, operation or plugging of the borehole.

***7. A borehole may not be used to divert water for any purpose.***

**NAC 534.4371 Boreholes: Plugging requirements; measures required if contaminant or contaminated water is encountered. (**NRS 534.020**,** 534.110**)**

1. A borehole must be plugged within 60 days after it is drilled.

2. Except as otherwise provided in subsection 3 ~~[s and 4]~~ , a borehole must be plugged:

(a) In the manner prescribed in NAC 534.420;

(b) If the ***uppermost*** ~~[highest]~~ saturated stratum is ~~[not more than 60 feet]~~ above the bottom of the borehole, by placing concrete grout, cement grout, neat cement or bentonite grout by tremie pipe in an upward direction from the bottom of the borehole to ***within 10 feet of*** the surface or by placing sodium bentonite chips or pellets specifically designed to be used to plug boreholes from the bottom of the borehole to ***within 10 feet of the surface or from the total depth of the borehole to 50 feet above the uppermost saturated ground water stratum. If the concrete grout, cement grout, neat cement, bentonite grout or dry bentonite material is not brought to within 10 feet of the surface, and after sufficient time has passed for this bottom plug to set up, the depth of the top of this lower plug shall be verified by measurement with appropriate equipment. The person responsible for plugging the borehole shall continue to install the plugging materials described in this section until the top of this bottom plug remains at least 50 feet above the top of the uppermost-saturated stratum. The person responsible for plugging the borehole shall then install uncontaminated fill material or other plugging materials described in this section from the top of the bottom plug to within 10 feet of the surface.***

***(c ) Placing concrete grout, cement grout or neat cement from 10 feet below the surface to the surface.*** ~~[the surface; or~~

~~(c) If the highest saturated stratum encountered in the borehole is more than 60 feet above the bottom of the borehole, by:~~

~~(1) Plugging the portion of the borehole from the bottom to 50 feet above the highest saturated stratum encountered in the borehole in the manner described in paragraph (a);~~

~~(2) Backfilling the portion of the borehole that extends from the materials placed in the borehole pursuant to subparagraph (1) to 10 feet from the surface with compacted soil which is uncontaminated; and~~

~~(3) Placing any of the materials described in paragraph (a) from 10 feet below the surface to the surface.~~

~~3. If a contaminant or contaminated water is encountered in a borehole, the strata that contain the contaminant or contaminated water must be sealed in the manner prescribed in subsection 2 to prevent the contaminant or contaminated water from commingling with other strata or the water contained in other strata. The vertical movement of contaminants in the well bore must be prevented.~~

***3.*** ~~[4.]~~ If the elevation of the bottom of the borehole is ***higher than*** ~~[more than 50 feet above]~~ the preexisting natural elevation of ***the uppermost*** ~~[any]~~ saturated ground water stratum, the borehole must be plugged by:

(a) Backfilling the borehole from the bottom to 10 feet from the surface with compacted soil which is uncontaminated; and

(b) Placing ***concrete grout, cement grout or neat cement*** ~~[any of the materials described in paragraph (b) of subsection 2]~~ from 10 feet below the surface to the surface.

***4.*** ~~[5.]~~ 5. If bentonite grout is used to plug a borehole, it must be mixed pursuant to the specifications recommended by the manufacturer.

***5.*** ~~[6.]~~ 6. If sodium bentonite chips or pellets or uncontaminated soil are placed in the borehole, they must be placed in such a manner that a bridge does not occur. Sodium bentonite chips or pellets may not be placed in more than 100 feet of standing liquid unless the chips or pellets have been coated by the manufacturer to delay hydration.

***6.*** ~~[7.]~~ 7. If casing is set in a borehole, the borehole must be completed as a well pursuant to the provisions of this chapter. The borehole must be plugged pursuant to NAC 534.420, or the casing must be removed from the borehole when it is plugged. The upper portion of the borehole may be permanently cased if the annular space between the casing and the walls of the borehole is completely sealed from the bottom of the casing to the surface pursuant to NAC 534.380.

**NAC 534.4373 Boreholes: Responsibility for plugging. (**NRS 534.020**,** 534.110**)** The owner and lessor of the land on which a borehole is located, the operator of the exploration project and the plugging contractor for the project are jointly and severally responsible for plugging the borehole pursuant to this chapter.

**NAC 534.4375 Boreholes, blast holes and seismic shot holes: Artesian conditions. (**NRS 534.020**,** 534.110**)** If an artesian condition is encountered in any borehole, blast hole or seismic shot hole, the artesian water strata must be contained pursuant to NRS 534.060 and NAC 534.378, and the borehole, blast hole or seismic shot hole must be sealed by the method described in subsection 2 of NAC 534.4371. The owner and lessor of the land on which a borehole is located, the operator of the exploration project and the drilling contractor for the project shall take the necessary steps to prevent the loss of water above or below the surface and to prevent the vertical movement of water in the well bore.

**NAC 534.4377 Treatment of certain holes as boreholes. (**NRS 534.020**,** 534.110**)**

1. For the purposes of this chapter, blast holes are not boreholes.

2. If the construction of a shot hole or a hole used for the installation of electrical conductors as part of a system to prevent corrosion or provide electrical grounding may cause waste or contamination of the ground water, the hole shall be deemed a borehole for the purposes of NAC 534.4369 and 534.4371.

**WAIVERS**

**NAC 534.440 Waiver to drill exploratory well to determine quality or quantity of water in designated basin. (**NRS 534.020**,** 534.110**)**

1. The request for a waiver to drill an exploratory well to determine the quality or quantity of water pursuant to NRS 534.050 in a designated basin must be submitted in writing and contain the following information:

(a) The location by ***public land survey*** ~~[public survey]~~, county assessor's parcel number***, vicinity map*** and plat map of the exploratory well anticipated to be drilled;

(b) The name, address and telephone number of the person who:

(1) Is collecting data from the exploratory well; and

(2) Will be available to answer questions concerning the well;

(c) The reason for requesting a waiver;

(d) The proposed diameter and depth of the exploratory well;

(e) The estimated starting and completion dates of the exploratory well, not to exceed 90 days after authority is given to drill;

(f) The name, address and telephone number of the person who will be responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well; and

(g) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned.

2. Each waiver for an exploratory well will bear a unique number preceded by the letter "W." The notice of intent to drill submitted to the division pursuant to NAC 534.320 and the record of work submitted to the division pursuant to NRS 534.170 must bear this number.

3. An application to appropriate water must be on file with the division or accompany each request for a waiver.

4. A copy of the waiver must be in the possession of the well driller at the drill site.

5. The exploratory well must be:

(a) Plugged by the well driller in the manner prescribed in NAC 534.420 within 3 days after the completion of the aquifer tests for which the well was drilled; or

(b) Completed as a well pursuant to the provisions of this chapter before the drill rig is removed from the drill site.

6. The water from the well may not be used for any purpose other than the purposes set forth in the waiver without the written approval of the state engineer.

***7. An exploratory well waiver will not be granted in areas where the division has determined that sufficient aquifer information already exists for the area.***

***8. A temporary permit to change the point of diversion, manner and place of use of an existing water right may be obtained pursuant to NRS 533.345 to provide water to support the exploratory well drilling operations.***

**NAC 534.442 Waiver to use water to explore for minerals. (**NRS 534.020**,** 534.110**)**

1. A request for a waiver to allow a temporary use of water from an existing well to explore for minerals or to drill a well and to use the water from the well to explore for minerals must be submitted to the state engineer in writing and contain:

(a) The amount of water that will be used each day;

(b) A brief description of the manner in which the water will be put to a beneficial use;

(c) The location of the water well by ***public land survey*** ~~[public survey]~~, county assessor's parcel number***, vicinity map*** and plat map;

(d) The name, address and telephone number of the person who will be responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well;

(e) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned;

(f) The name, address and telephone number of a person who will be available to answer questions concerning the well; and

(g) The date the project is scheduled to be completed.

2. A waiver granted for the temporary use of water from a well for the exploration of minerals will bear a unique number preceded by the letters "MM." The notice of intent to drill submitted to the division pursuant to NAC 534.320 and the record of work submitted to the division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the state engineer.

**NAC 534.444 Waiver to use water to explore for oil, gas or geothermal resources. (**NRS 534.020**,** 534.110**)**

1. A request for a waiver to allow the temporary use of water from an existing well to explore for oil, gas or geothermal resources, or to drill a well and use the water from the well to explore for oil, gas or geothermal resources, must be submitted to the state engineer in writing and contain:

(a) The location of the proposed water well and the oil, gas or geothermal well by ***public land survey*** ~~[public survey]~~, county assessor's parcel number***, vicinity map*** and plat map;

(b) The oil, gas or geothermal state or federal permit and lease number, name of the well and American Petroleum Institute number, if assigned;

(c) The amount of water that will be consumed from the well each day;

(d) The date the project is scheduled to be completed;

(e) The name, address and telephone number of the person responsible for plugging the well, and the name, address and telephone number of the owner of the land if he is not the person who is responsible for plugging the well;

(f) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned; and

(g) The name, address and telephone number of a person who will be available to answer questions concerning the well.

2. A waiver that allows the temporary use of water from a water well to explore for oil, gas or geothermal resources will bear a unique number preceded by the letters "OG." The notice of

intent to drill submitted to the division pursuant to NAC 534.320 and the record of work submitted to the division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the state engineer.

**NAC 534.446 Waiver to use water for construction of highway. (**NRS 534.020**,** 534.110**)**

1. A request for a waiver to allow the temporary use of water from an existing well for the construction of a highway, or to drill a well and use the water from the well for the construction of a highway, must be submitted to the state engineer in writing and contain:

(a) The location of the proposed water well by ***public land survey*** ~~[public survey]~~, county assessor's parcel number***, vicinity map*** and plat map;

(b) The project and contract number, if applicable;

(c) The total amount of water that will be consumed each day;

(d) The name, address and telephone number of the person responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well;

(e) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned;

(f) The name, address and telephone number of a person who will be available to answer questions concerning the project; and

(g) The date the project is scheduled to be completed.

2. A waiver that allows the temporary use of water from a well for the construction of a highway will bear a unique number preceded by the letter "C." The notice of intent to drill submitted to the division pursuant to NAC 534.320 and the record of work submitted to the division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the state engineer.

**NAC 534.448 Waiver to drill well in shallow ground water system to alleviate certain potential hazards. (**NRS 534.020**,** 534.110**)**

1. A request for a waiver to drill a well in a shallow ground water system for removing water for the purpose of alleviating potential hazards to persons and property resulting from the rise of ground water caused by secondary recharge must be submitted to the state engineer in writing and contain:

(a) The location of the proposed well by ***public land survey*** ~~[public survey]~~, county assessor's parcel number***, vicinity map*** and plat map;

(b) The project and contract number, if applicable;

(c) The total amount of water that will be consumed each day;

(d) The name, address and telephone number of the person responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well;

(e) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned;

(f) The name, address and telephone number of a person who will be available to answer questions concerning the project; and

(g) The date the project is scheduled to be completed.

2. A waiver to drill a well in a shallow ground water system for removing water for the purpose of alleviating potential hazards to persons and property resulting from the rise of ground water caused by secondary recharge will bear a unique number preceded by the letters "DW." The notice of intent to drill submitted to the division pursuant to NAC 534.320 and the record of work submitted to the division pursuant to NRS 534.170 must bear this number.

3. A copy of the waiver must be in the possession of the well driller at the drill site.

4. The well must be plugged in the manner prescribed in NAC 534.420 within 3 days after the completion of the project.

5. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the state engineer.

**NAC 534.450 Waiver of requirements of chapter. (**NRS 534.020**,** 534.110**)**

1. Except as otherwise provided in subsection 2, the state engineer may, for good cause shown, waive a requirement of the provisions of this chapter.

2. The state engineer will not waive the requirements set forth in paragraph (c) of subsection 3 of NAC 534.360.

3. A request for a waiver of a requirement of this chapter must be made in writing and include:

(a) A brief statement of the reason for requesting the waiver and the section of the regulations to be waived;

(b) The location or proposed location of the well by ***public land survey*** ~~[public survey]~~;

(c) The name and address of the owner of the well;

(d) The street address of the location of the well or, if there is no street address, a description of the location of the proposed well, including, but not limited to, common landmarks and cross-streets near the location of the well;

(e) The county assessor's parcel number for the location of the proposed well;

(f) A description of the proposed design and a sectional drawing of the proposed well that includes the depths to the aquifers, the locations of the screens and seals and the materials that will be used;

(g) A notarized affidavit provided by the division and signed by the owner of the land where the well will be located or his authorized agent which states that the owner of the land will be responsible for plugging the well if it is abandoned;

(h) Any available data to categorize the hydraulic heads, water quality and permeability characteristics of the aquifer;

(i) A monitoring plan; and

(j) Any other information required pursuant to the provisions of this chapter.

4. After reviewing the request, the state engineer will issue a written notice of his decision to the owner of the well.

5. Each waiver will bear a unique number preceded by the letter "R." The notice of intent to drill submitted to the division pursuant to NAC 534.320 and the record of work submitted to the division pursuant to NRS 534.170 must bear this number.

6. The well driller shall ensure that the well complies with the provisions of the waiver and have a copy of the waiver in his possession when he drills the well.

7. The water from the well may not be used for any purpose other than the purpose set forth in the waiver without the written approval of the state engineer.

## *CONTINUING EDUCATION*

***1) Requirements. Every licensed well driller shall have earned at the time of license or permit renewal the credit units required by these rules. The credit units shall have been obtained during the licensing period preceding the application for renewal.***

***2) Earning Credit Units. A credit unit is earned for each hour the licensee devotes to attendance at workshops, seminars, short courses and other educational opportunities devoted to drilling or related subjects acceptable to the Division. These may include completion of college courses, correspondence courses, videotaped courses, active participation in professional organizations, and other endeavors such as authoring appropriate publications.***

***3) Record Keeping. Documentation to support credit units claimed is the responsibility of the licensed well driller. Records required include but are not limited to:***

- ***a) A summary log showing the type of activity claimed, sponsoring organization, duration, instructor's name, and credit units. The summary log shall be on a form provided by the state engineer.***
- ***b) Attendance verification records in the form of completion certificates or other documents providing evidence of attendance.***

***4) Submittal and Maintenance of Records. Copies of the summary log form for continuing education records for the preceding license period shall be submitted with applications to renew licenses. These records shall be maintained for a period of three (3) years and shall be available for review by the state engineer at the request of the Division.***

***5) Insufficient Credit Units. If at the time of renewal, the licensee is unable to provide verification of the required credit units, the Division will deny renewal of the well driller's license, except as otherwise provided in the following:***

- ***a) The Division may withhold action on an application for renewal for a period not to exceed ninety (90) days to allow the licensee to provide verification of the required credit units. The licensee is not authorized to drill until the verification is provided and the renewal is issued.***
- ***b) The Division may exempt an licensee from all or part of the continuing education requirements if the licensee served on active duty in the armed forces of the United States for one hundred twenty (120) consecutive days or more during the licensing period prior to filing the application for renewal; or the licensee suffered physical disability, serious illness, or other extenuating circumstances that prevented the licensee from earning the required units.***
- ***c) A licensed well driller or operator who has chosen to allow his license to expire or otherwise become of no effect shall be exempt from continuing education requirements unless an application for renewal is filed less than three (3) years after the license expired or otherwise became of no effect.***

6) ***Out-of-State Residents. The continuing education requirements for a non-resident licensee for a license shall be the same as for resident licensees.***
7) ***Responsibility for Education Development and Implementation. The Nevada Ground Water Association (NGWA), an authorized state affiliate association of the National Ground Water Association, may be delegated responsibility to develop and implement a program for continuing education for review and approval by the Division.***
8) ***The Nevada Ground Water Association shall provide recommendations to the Division concerning the amount and nature of continuing education required to maintain and improve well driller competency. The NGWA shall provide recommendations to the Division concerning the credit value to be assigned to continuing education opportunities. The NGWA shall also encourage other well driller association(s) and the education and professional communities to make additional opportunities available. The Division shall determine the value for all activities submitted to fulfill continuing education requirements.***
9) ***Should the Nevada Ground Water Association not submit a suitable program for continuing education or that program not be approved by the Division, the state well driller's advisory board may be delegated responsibility to develop and implement a program for continuing education for review and approval by the Division.***