



STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

GUIDELINES AND RULES FOR THE PREPARATION OF WATER RIGHT MAPS

(Revised September 2003)

STATE ENGINEER

HUGH RICCI

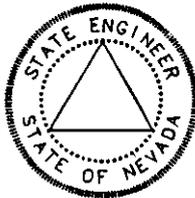


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GUIDELINES AND RULES FOR THE PREPARATION OF WATER RIGHT MAPS

PURPOSE AND AUTHORITY

The purpose of these "Guidelines And Rules For The Preparation Of Water Right Maps" is to explain requirements for supporting maps concerning water right applications, proof of beneficial use of water, proof of appropriation of water, and for other maps as required by the State Engineer to facilitate review and filing of maps, to assist the State Water Right Surveyors to properly prepare supporting maps, to reduce the incidence of return-for-correction and rejection of maps, and to facilitate interpretation of water right terms, conditions, and limitations.

Nevada Revised Statutes (NRS) authorizes the State Engineer to require that supporting maps to be filed for record in the State Engineer's office must be prepared in compliance with rules and regulations prescribed by the State Engineer (Ref. NRS 533.100, 533.260, 533.350, 533.355, 533.405, 533.415, and other NRS sections).

The Division may waive specific requirements, and may specify additional requirements when it is determined that particular circumstances warrant deviation from these Guidelines And Rules For The Preparation Of Water Right Maps (the guidelines and rules).

Failure to comply with these map guidelines and rules may result in delay in reviewing a map and in publication of the public notice for a water right application, and may result in rejection of the map and cancellation of the water right application or permit.

Each map prepared and survey made under the provisions of the Guidelines And Rules For The Preparation Of Water Right Maps must be done by a State Water Right Surveyor, or under the direct supervision of a State Water Right Surveyor.

Each supporting map must include an affidavit of a State Water Right Surveyor as required by these guidelines and rules.

Any State Water Right Surveyor who has falsely sworn to a map and survey submitted to the State Engineer may be barred from the further practice of engineering in matters before the State Engineer (Ref. NRS 533.420).

State Water Right Surveyors are licensed only by the State Engineer, Nevada Division of Water Resources.

Each water right application must be supported by a map illustrating the point of diversion and place of use of the water and other aspects of the water right in compliance with the

requirements specified by the guidelines and rules. Each map is incorporated as part of the water right application.

Map requirements may be waived for an application for a temporary water right and for other water right maps upon approval by the Division.

Each water right map supporting proof of beneficial use, proof of appropriation, or another aspect of a water right, must be prepared in compliance with requirements specified for a water right application map and with other requirements specified by the guidelines and rules.

Any map, survey, engineering data, surveying data or report to be filed for record in the State Engineer's office and submitted by a professional engineer or professional land surveyor licensed by the Nevada Board of Registered Professional Engineers and Land Surveyors must comply with the Board's requirements.

GUIDELINES AND RULES FOR THE PREPARATION OF WATER RIGHT MAPS

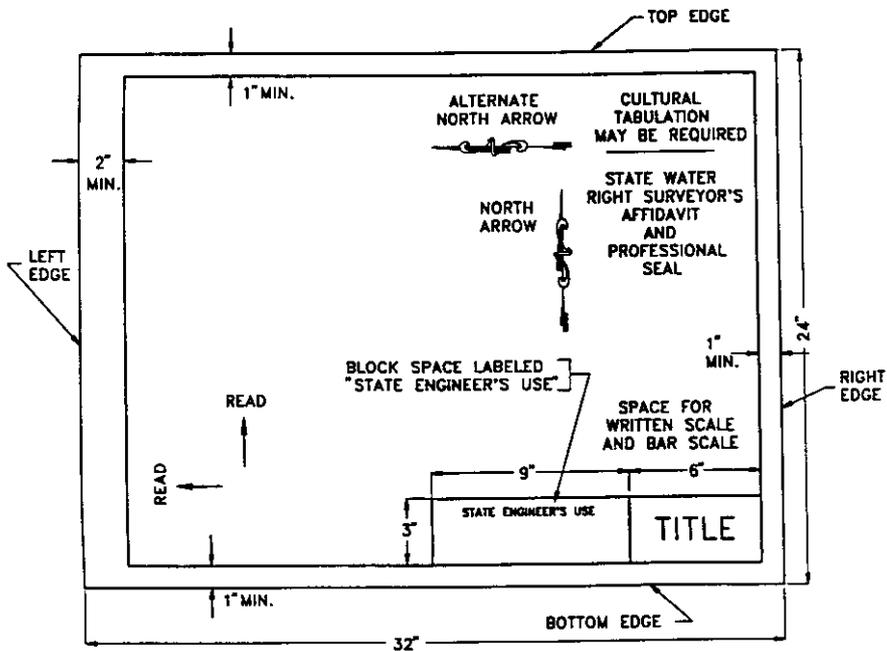
I. GENERAL REQUIREMENTS

1. All maps must be prepared on a good grade of commercial tracing linen, mylar, or other flexible, rugged, resilient, translucent material. Maps prepared using paper or similar, easily damaged material will be rejected.
2. Drafting must be done on the rough side of the material.
3. Maps must be drawn with waterproof, opaque, black indelible drawing ink, and the ink must not smear or chip. All lines and lettering must be well defined and legible when the map is reproduced.
4. Colored ink other than black must not be used to delineate or label features or for explanatory notes.
5. All maps must be uniform in size, 24-by 32-inches overall dimensions, with extra-wide borderline, 2-inches minimum from the left edge and 1-inch minimum from the other edges.
6. A 3-inch vertical by 6-inch horizontal title block must be placed in the lower right-hand corner of the map, and must be enclosed by the same width line as the borderline. The title block must specify the purpose of the map, the applicant's name, the description of the source, the proposed use, and the county and state within which the point of diversion is located. Refer to examples of title block lettering given upon later pages in this pamphlet.

7. The name of the State Water Right Surveyor or the company submitting the map must not be placed within the title block; instead the names must be placed in an area outside of the title block, elsewhere upon the map.

8. A 3-inch vertical by 9-inch horizontal block area must be placed in the lower right-hand corner of the map adjacent to the title block and the bottom borderline of the map, the area must be labeled "STATE ENGINEER'S USE," and the area must be enclosed by the same width line as the borderline.

DIAGRAM OF MAP

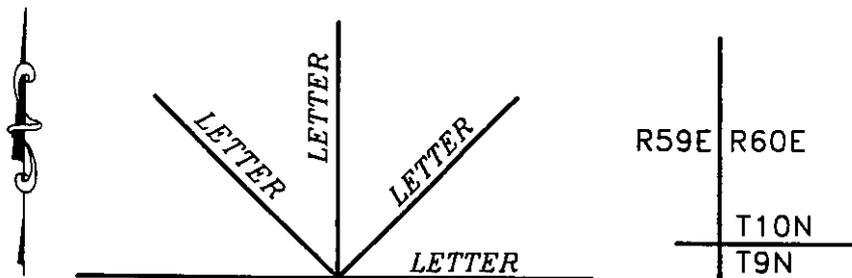


9. The borderline must be an extra-wide single line.

10. A north arrow must be placed upon the map, and the north direction must point to the top edge of the map (i.e., the 32-inch edge of the map opposite the title block), or alternately the north direction must point to the left edge of the map (i.e., the 2-inch border edge).

11. All lettering must be neat, easily legible, clear in meaning, and consistent in size and appearance. Except as otherwise required by these guidelines and rules, all lettering must be placed to read from the bottom edge of the map, or from the right edge of the map when facing the north or west direction upon the map, or at a 45-degree angle from the north direction upon the map.

LETTERING DIAGRAM



12. Maps must be drawn to a scale not less than 1,000 feet to the inch to illustrate the point of diversion and surveying tie and the place of use. The scale must be labeled upon the map 1-inch above the title block, along with an appropriate bar scale. The place of use scale may be less than 1,000 feet to the inch upon approval of the Division; however when the lesser scale is used, the point of diversion and surveying tie must be illustrated by a detailed drawing with the scale not less than 1,000 feet to the inch.

13. Profiles must be drawn to a horizontal scale not less than 400-feet to the inch and to an appropriate vertical scale to clearly delineate features.

14. A new map or a previously filed map may be used to support more than one application, providing that all necessary information is given. A new map must specify the name of each applicant.

15. More than one sheet may be used to illustrate the extent of the project. Each sheet must be numbered consecutively in the upper right-hand corner outside of the borderline, as follows: "Sheet No. _____, of _____ sheets." The total number of sheets must be specified in the surveyor's affidavit.

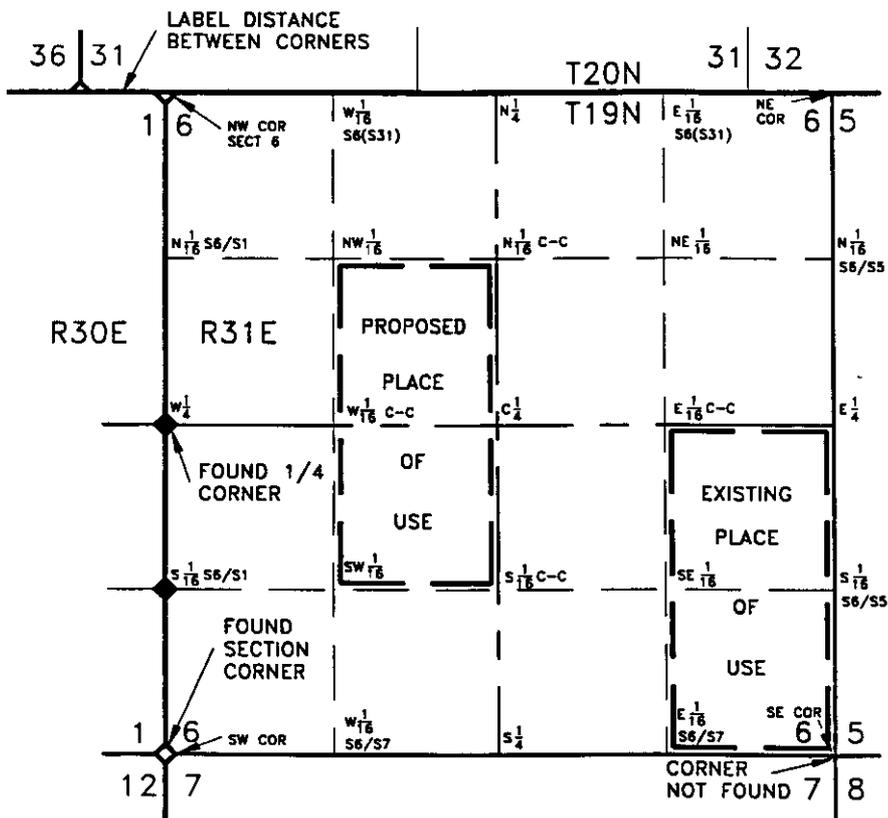
16. Notes, labels, or symbols must not be glued, taped or otherwise attached to the map. All lettering, lines, and symbols must be applied directly to the drawing surface.

II. DRAFTING REQUIREMENTS

1. The drafting must illustrate features as follows:

- Township and range lines by solid, extra-wide, black line, with township and range labels.
- Section line by solid wide, black line.
- Quarter-section line by alternate long and short-dashed, medium width, black line.
- Sixteenth-section line by short-dashed, narrow, black line.
- Place of use by dashed, wide, black line, and labeled proposed, or existing, place of use when necessary to clarify.
- Found section corner illustrated by larger hollow diamond, with the corner and the monument description labeled.
- Found quarter-section corner and sixteenth-section corner illustrated by smaller solid diamond, with the corner and the monument description labeled.
- All section numbers labeled at section corners and quarter-section corners, with labels oriented to be read when facing the north direction upon the map.
- Township and range designations labeled, with labels oriented to be read when facing the north direction upon the map.
- A found corner used as a reference monument must be labeled "FOUND CORNER." Only found corners may be used as reference corners.
- Use only waterproof, opaque, black indelible drawing ink. Do not use various colored lines or shaded areas to delineate features.
- All symbols and labeling must conform to the "Manual of Instructions for the Survey of the Public Lands of the United States," 1973, U. S. Bureau of Land Management, Technical Bulletin 6, or the latest revision; and to the "Guidelines and Rules for the Preparation of Water Right Maps," Nevada Division of Water Resources.

SECTION DIAGRAM



2. Label public land survey corners as follows:



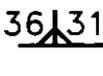
Section Corner Found, Larger Hollow Diamond. Standard U.S. Public Land Survey brass cap; otherwise label monument description.



1/4 Corner (or 1/16 Corner) Found, Smaller Solid Diamond. Standard U.S. Public Land Survey brass cap; otherwise label monument description.



Corner Not Found



Label Distance Between Corners

Label the description of the monument for each found corner used as a reference monument (e.g., U.S.G.S. or U.S.G.L.O. Brass Cap, Rock Mound, Iron Pipe, Wood Post).

The following conventional signs or symbols should be used. Where symbols not shown below are used, an explanatory "legend" must appear on the face of the map or each feature must be labeled upon the map:

3. Conventional map symbols:



Rivers or Perennial Streams.



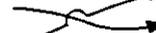
Main Supply Ditches or Canals.



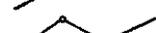
Secondary or Lateral Ditches.



Dams, Bridges.



Intersecting Ditches or Canals.



Traverse Lines.



Tie Lines.



Roads.



Fences.



Railroads.



Buildings.

III. PLACE OF USE

1. The place of use must be illustrated for each 40-acre legal subdivision (i.e., 1/16 section) or portion thereof, and the boundary delineated by dashed, wide, black line.

2. The exact shape of the existing cultivated area must be illustrated, and clearly delineated, and the acreage of the area must be labeled upon the map for each 40-acre legal subdivision of public survey (i.e., 1/16-section) for the existing irrigation use as follows:

- For a cultural map supporting proof of beneficial use, or proof of appropriation (i.e., claim of vested water right);

- For a map supporting an application to change the place of use of a portion of a certificated water right, an adjudicated water right (i.e., decreed water right), or a claim of vested water right;

- For a map supporting the relinquishment of a water right;

- For a map supporting the assignment of a water right; or

- When the Division determines that the requirement is necessary to clarify interpretation of the water right.

- This requirement does not apply when the existing water right proposed to be changed is a permitted water right or when the entire existing water right is proposed to be changed.

3. When the place of use is located in unsurveyed territory, or territory subdivided into public land survey tracts and not subdivided into townships and sections, the map must also illustrate the approximate legal subdivisions, i.e., townships, sections and quarter sections, as determined by protraction (i.e., extension) of the township and sections from the nearest adjacent surveyed territory, and the area must be labeled as "UNSURVEYED" upon the map. When the territory has been subdivided into public land survey tracts, the tracts, sections, and 1/16 sections must be illustrated and labeled.

4. When the proposed point of diversion is located in one county (or state) and the proposed place of use or the existing point of diversion or the existing place of use is located in a different county (or state), illustrate the borderline, label each county (or state) as appropriate, and explain by a note upon the map.

5. When a supporting map illustrates a cultural area (e.g., a cultural map), the exact shape of each public land subdivision, i.e., section, quarter section, and sixteenth section, must be illustrated as determined by U.S. Government public land survey records. An idealized "square" shaped subdivision will be rejected as unacceptable to illustrate an irregular shaped subdivision.

IV. POINT OF DIVERSION

1. The map must illustrate the location of the point of diversion within a 40-acre legal subdivision (i.e., 1/16 section) and by accurate bearing and distance tie to a found section corner or quarter-section corner, or other monument approved by the Division. When the point of diversion is located in unsurveyed territory, the map must also illustrate the approximate legal subdivision as determined by protraction similarly as specified by the requirements to illustrate the place of use.
2. The illustration of a surveying tie to an off-set section or quarter-section corner located upon a township line or range line must also illustrate the nearest corner of the adjoining township together with the off-set distance between the two corners. Each corner and the corner monument description must be labeled.
3. U.S. Public Land Survey Lots (i.e., Government Lots) within a surveyed, irregular section must be illustrated and labeled.
4. The full description of the corner to which the surveying tie is made and of the markings upon the corner monument must be labeled upon the map.
5. An application for an environmental permit may specify more than one (1) point of diversion within each 1/16 section. A separate application must be submitted for each 1/16 section. A surveying tie to a found section corner or quarter section corner for each point of diversion must be illustrated and labeled upon the map.

V. BASIS-OF-BEARING

1. Specify upon the map the basis-of-bearing, i.e., the reference bearing used to determine all other bearings and the method used to establish the reference bearing. Specify the record source.
2. When magnetic north is selected as the reference bearing, specify "MAGNETIC" and the declination from true north.
3. When a line of known bearing is selected as the reference bearing line, specify the record source used to determine the reference bearing. The line must be established by two found corners, either section corners or quarter-section corners. The reference line and corners must be illustrated and labeled upon the map; also the description of the corner monuments must be labeled.
4. When Solar or Polaris observation is selected to determine the reference bearing, specify either "SOLAR OBSERVATION" OR "POLARIS OBSERVATION" upon the map.
5. Basis-of-bearing may be determined by relying upon the State Plane Coordinate System Grid control monuments, or by relying upon the Global Positioning System (GPS) control monuments, upon

approval of and in compliance with requirements specified by the Division.

6. When GPS bearing reference is selected, specify "GPS" and the precision in meters upon the map. Precision must not be greater than three (3) to five (5) meters for the point of diversion.

7. Basis-of-bearing determined by relying upon property corners or other private surveying control monuments normally will be rejected, unless specifically approved by the Division before submitting the map.

8. All bearings must be true-north referenced bearings.

VI. POINT OF RETURN OF WATER TO THE SOURCE

For non-consumptive use of water (e.g., power, milling, geothermal, and air-conditioning) illustrate the point of return of the used water to the water source within the 40-acre legal subdivision (i.e., 1/16 section) and by accurate bearing and distance tie to a found section corner or quarter-section corner.

VII. SOURCE OF WATER SUPPLY

1. A surface water source must be illustrated and the name of the source must be labeled upon the map. An underground water source must be specified in the title block.

2. When the proposed diversion of water is from a natural water course or an impoundment, the channel of the water course or shoreline of the impoundment must be illustrated for at least 500 feet on each side of the point of diversion. The channel from a spring must be illustrated; or when no channel exists, the direction of the drainage from the spring must be illustrated.

3. When the proposed diversion of water is from an underground source (i.e., a proposed well), the map must illustrate any lake, reservoir, river, stream, spring, main ditch, other impoundment and channel within one-quarter ($\frac{1}{4}$) mile of the proposed point of diversion.

VIII. CHANGE IN THE POINT OF DIVERSION, PLACE OF USE, OR MANNER OF USE OF WATER

1. Change Point of Diversion.

The map must illustrate the location of the proposed point of diversion and of the existing point of diversion by 40-acre legal subdivision (1/16 section) and accurate bearing and distance tie to a found section corner or quarter-section corner. Refer to the section of the guidelines explaining requirements to illustrate the point of diversion.

2. Change Place of Use.

The location of the proposed place of use and of the existing place of use must be illustrated upon the map by 40-acre legal subdivision (1/16 section), unless otherwise approved by the Division. When proposing to change the place of use of an existing irrigation water right, the existing irrigated area to be removed from irrigation must be illustrated, with the acreage of the area labeled, upon the map by 40-acre legal subdivision (1/16 section). Refer to the section of the guidelines explaining requirements to illustrate the place of use.

IX. EXISTING WORKS

The location and names of all streams, ditches, railroads, highways, fences and other features, which will be crossed by or connected with the proposed works, must be shown.

X. WORKS OF DEVELOPMENT

The location and description of all works that have been constructed or will be constructed in developing the source must be shown on the map. All storage reservoirs must be shown by a contour line, with the location of the impounding dam illustrated on the map. For detailed requirements see "Laws and Permitting Information Pertaining to Dams," Nevada Division of Water Resources.

XI. TABULATION OF ACREAGE ON CULTURAL MAPS

The following tabulation must be shown in the upper right-hand corner of all maps showing cultural areas:

Cultural Map Tabulation

Section	Sub-division	Town-ship	Range	Cultivated acreage	Description of culture	Date of first culture*

*This column is required on maps supporting proofs of appropriation and will be completed by the Division.

XII. EXAMPLES OF MAP TITLE BLOCK WORDING

1. For Application to Appropriate Water, Specify:

* * * * *

Map To Accompany Application to Appropriate Water

For (specify use of water¹) use

By (specify name of applicant)

From (specify name of source²)

In (specify names of county and state³)

* * * * *

2. For Proof of Beneficial Use of Water, Specify:

* * * * *

Map To Accompany Proof of Beneficial Use Under

Permit No. _____

For (specify use of water¹) use

By (specify name of applicant or successor)

From (specify name of source²)

In (specify names of county and state³)

* * * * *

¹Specify the use of water as stockwatering, power, mining, milling, quasi-municipal, domestic, commercial, industrial, or other use as appropriate.

²Specify the name of water source as the name of a lake, impoundment, spring, river, stream, or other surface water source as appropriate, or as "underground" for a proposed well.

³Specify the names of the county and state in which the point of diversion is located.

3. For Proof of Appropriation of Water, Claim of Vested Water Right, Specify:

* * * * *

Map To Accompany Proof of Appropriation

For (specify use of water¹) use

By (specify name of original claimant or successor)

From (specify name of source²)

In (specify names of county and state³)

* * * * *

4. For Application to Change Existing Right, Specify:

* * * * *

Map to Accompany Application to

Change the

(Specify Point of Diversion, Place of Use, and

Manner of Use of a Portion, as appropriate)

Under Permit _____, Certificate (if applicable)

For (Specify use of water¹) use

By (specify name of applicant)

From (specify name of source ²)

In (specify names of county and state³)

* * * * *

5. For Relinquishment of Water Right, Specify:

* * * * *

Map to Accompany Relinquishment (of a portion, as appropriate)

Under Permit _____, Certificate (if applicable)

From existing (specify existing use of water¹) use

By (specify name of applicant or successor)

From (specify name of source²)

In (specify names of county and state³)

For proposed (specify proposed use of water¹) use

To serve (specify number of lots) Lots (or other units as appropriate)

Under (specify name of subdivision) Subdivision (or other project as appropriate)

In (specify names of county and state³)

* * * * *

XIII. EXAMPLES OF AFFIDAVITS

The following examples of affidavits must be placed on maps, as appropriate, and subscribed to by the State Water Right Surveyor who prepares the map to confirm the accuracy and completeness of the map.

Example of affidavit when a survey is required.

STATE OF¹)
) ss.
COUNTY OF¹ _____)

I, (print name of state water right surveyor), being first duly sworn, depose and say that this map, consisting of _____ sheets, numbered from 1 to _____, inclusive, has been correctly drawn to the designated scale from field notes of a survey made by me, or under my supervision and direction, between the (specify begin date as day, month, and year), and the (specify end date); that it truly and correctly represents the proposed location and extent of the works used to divert water from (specify name of source), in (specify names of county and state), by (specify applicant's name),....

* * * * *

Insert in this space one of the following statements number 1 through 7, as appropriate, as determined by the proposed use of water.

* * * * *

Original Signature
(State Water Right Surveyor)

(Nevada P.E. or P.L.S. Seal Required)²

Subscribed and sworn to before me

this _____ day of _____, _____.

(this line for Notary Public signature)

Notary Public in and for _____ County, (specify state).

My Commission Expires _____.

(Notary Public Seal Required)

¹Specify county and state where notarized.

²P.E. means "professional engineer"; and P.L.S. means "professional land surveyor."

Example of affidavit when locations and descriptions are determined by a method other than field survey.

A survey will be required when the Division determines that the records used or calculations done are unreliable.

STATE OF _____)
) ss.
COUNTY OF _____)

I, (print name of state water right surveyor), being first duly sworn, depose and say that site inspections have been made by me, or under my supervision and direction, between the (specify begin date as day, month, and year), and the (specify end date); that the location of each reference monument has been verified by site inspection; that the point of diversion and place of use sites have been inspected; that this map, consisting of _____ sheets, numbered from 1 to _____, inclusive, has been correctly drawn to the designated scale from surveying calculation notes prepared by me, or under my supervision and direction, relying upon analysis of recorded survey maps and other recorded surveying documents³ in the office of the (specify the record source, e.g., County Recorder, State Engineer, or other public records of any local, state, or U.S. Government agency)³; that this map truly and correctly represents the proposed location and extent of the works used to divert water from (specify name of source), in (specify names of county and state), by (specify applicant's name),....

* * * * *

Insert in this space one of the following statements number 1 thru 7, as required, as determined by the proposed use of water.

* * * * *

Original Signature
(State Water Right Surveyor)

(Nevada P.E. or P.L.S. Seal Required)²

Subscribed and sworn to before me

this _____ day of _____, _____.

(this line for Notary Public signature)

Notary Public in and for _____ County, (specify state).

My Commission Expires _____, _____. (Notary Public)
(Seal Required)

³Specify in a reference note upon the map, the type of document (e.g. map, deed), document record number, and recording agency for each document.

1. Insert for Application to Appropriate Water
For Irrigation:

* * * * *

...for irrigation purposes. That the proposed point of diversion, the approximate location and size of the diverting channel or other conduit, all reservoirs or basins, the location and names of all other works which will cross or connect with the proposed works, and the boundary of all lands, showing by 40-acre subdivisions the areas proposed to be served, are fully and correctly designated thereon.

* * * * *

2. Insert for Proof of Beneficial Use for Irrigation:

* * * * *

...for irrigation purposes under Permit No. _____. That the point of diversion, the location, size of the diverting channel or other conduit, location and description of all measuring devices, the location and extent of lands owned or controlled by the applicant upon which water applied for under Permit No. _____ is used, together with the area and kind of culture in each 40-acre subdivision, and the location and names of all other works or streams which are crossed by or connected with said works are fully and correctly designated thereon.

* * * * *

3. Insert for Application to Appropriate Water for
Stockwatering or other consumptive use:

* * * * *

...for (specify stockwatering or other use as appropriate) purposes. That the proposed point of diversion, the approximate location and size of the diverting channel or other conduit, the place and manner of use, and the location and names of all other works or streams which are crossed by, or connected with the said works, are fully and correctly designated thereon.

* * * * *

4. Insert for Applications to Appropriate Water for Power, Mining, Milling or Air-conditioning:

* * * * *

....for (power, (mining), (milling), (air-conditioning)
(insert proper use)

purposes. That the proposed point of diversion and return, the location of the (powerhouse), (mill), (mine), (hotel), the approximate size and capacity of the diverting channel (or conduit), and the location and names of all other works or streams which are crossed by or connected with said works, are fully and correctly designated hereon.

* * * * *

5. Insert for Proof of Appropriation for Irrigation:

* * * * *

....for irrigation purposes. That all other works or streams which are crossed by or connected with said works, and the boundary, area and kind of culture of lands irrigated, are correctly shown and designated hereon.

* * * * *

6. Insert for Proof of Appropriation for Stockwatering or other consumptive use:

* * * * *

....for (specify stockwatering or other use as appropriate) purposes; that the point of diversion, the location and size of the diverting channel or other conduit, the place and manner of use, and the location and names of all other works or streams which are crossed by or connected with the said works, are fully and correctly designated thereon.

* * * * *

7. Insert for Proof of Appropriation for Power, Mining or Milling:

* * * * *

....for (power), (mining), (milling), purposes. That all other
(insert proper use)
works or streams which are crossed by, or connected with, said works; the profile and cross-sections of the diverting channel (conduit) and the description and size of the turbine (or other power unit), are correctly shown and designated hereon.

* * * * *

XIV. PROFESSIONAL ENGINEER'S AND LAND SURVEYOR'S SEAL

The map must be stamped with the professional seal of and signed by the professional engineer (P.E.) or land surveyor (P.L.S.) who prepared the map, as required by the Nevada Board of Registration for Professional Engineers and Land Surveyors.

XV. EXAMPLES OF COMPLETED MAPS

Examples of completed maps may be obtained on request.

XVI. MAILING INSTRUCTIONS

All maps must be transmitted to the State Engineer's office in suitable mailing tubes. Maps folded and inserted in envelopes will not be accepted.