

Considered MARCH 25 19 81

Name of Applicant BUILDER'S DEVELOPMENT GROUP, INC.

Post Office Address Box 1626, RAPID CITY 57709

Amount of Water Claimed .3

Source of Water Supply 1040' (DEADWOOD FORMATION)

Water to be used for SHD

Acres to be irrigated —

maximum
acre feet

Water to be diverted and used in PENNINGTON County

about 2 1/2 miles SOUTH of RAPID CITY

PROOF OF PUBLICATION Received (JAF) 3-10-81

Not Received

Approved 3/25/81

Subject to DW

Not Approved

Action deferred

APPLICATION

see protest letter

Priority

Date

Received 2-13-81

Application Complete yes ☒ no ☐

FEE 150.00

2-13-81

Remarks W Quality division have questions on this application

Date information and/or

fee or corrected Application received

Period of Annual use CONTINUOUSLY

Received yes ☐ no ☐ APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as application yes ☐ no ☐ Remarks

Disapproved

Returned

Diversion Point

SE 1/4 SW 1/4 29-1N-7E

Lands to be irrigated

				29	
				x	

WELL
LOG

Remarks

Driller TAYLOR, DR.

Licensed (yes)

no

Depth 1040' DEADWOOD FORMATION

Water Right No. _____

MAP

Map No. 1505-2 Map located in Water Right ✓ Map file _____

Type of Map DRAWN Prepared by PE

+++++

REVIEWED

This Application was reviewed within 30 days of date received, accepted as complete, Number assigned and written up for advertisement before the Board on 3-25-81

Deity M. Peterson
(Signed)

+++++

PROTESTS

Letters/Petitions in File yes no _____ Remarks _____

REMARKS

Date

F.F. & C

Final Decision, including F.F. & C of Law were adopted _____

OF LAW,

Date

FINAL

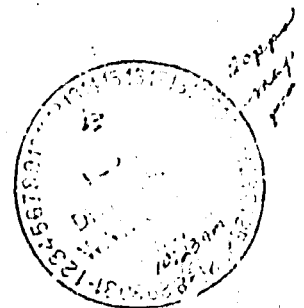
Final Decision mailed to parties and/or parties notified that Final Decision

DECISIONS

ETC.

was adopted _____

Remarks _____



No. 1749-2
 Map No. 1505-2 Water Division No. 2 UPPER CHEYENNE District
 Above for Office Use 10120110

APPLICATION FOR PERMIT To Appropriate Water within the State of South Dakota

Check one of the following:

New ☒ Vested Right ☐ Future Use ☐

Change in Diversion ☐ Additional Diversion ☐

Change in Acreage ☐ Additional Acreage ☐

1. Name of Applicant Builder's Development Group, Inc. Phone No. 605-348-6361

Post Office Address Box 1636, Rapid City State South Dakota 57709
(Street, RR, or Box) (Town) (Zip Code)

If a corporation show date and place of incorporation June 19, 1978 - Rapid City

2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract

3. Name of diversion work Countryside

4. Amount of water claimed (cubic feet per second) .3

5. Source of water supply Well

6. Location of point of diversion See Map - SW1/4 Section 29, T1N, R2E, BHM.

Pennington County

7. Annual period or periods during which water is to be used Year Around

8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) Domestic Housin

9. For irrigation use, Total number of acres to be irrigated 0-

List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 1 years. Additional time required to complete application of water to the proposed beneficial use 2 years.

11. Choice of county newspaper for publication of Notice of Intent to Appropriate Water Rapid City Journal

12. Principal Features of the Proposed Water Supply System

A. Works proposed to divert water from its natural source.
 Deep well to Deadwood formation 1040' deep 8" Bore, with 40 HP
 Submersible Pump - 125 GPM

B. Works proposed to transport water to place of use.
 System of 8" and 6" piping mains, storage, fire hydrants,
 water services to houses.

C. Works proposed to apply water to beneficial use.
 Use for household purpose and house lawn watering.

This Phase
 Estimated Total Cost \$ 250,000.00

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instructions concerning preparation.)

STATE OF SOUTH DAKOTA)
) ss.
 County of Pennington)

I, Mark Knecht the applicant, certify that I have read the foregoing application and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.

Signed Mark Knecht
 Subscribed and sworn to before me this 10th day of February, 1978.
Robert C. Smith
 Notary Public (or other qualified officer)

WATER RIGHT APPLICATION APPROVAL

The Water Management Board hereby approves Water Right Application No. 1749-2

BUILDER'S DEVELOPMENT GROUP, INC. Box 1236, RAPID CITY
(Applicant) (Post Office Address)
SOUTH DAKOTA 57709 With the following qualifications.
(State)

The ~~irrigation~~ well approved under this Permit is located near domestic wells which may obtain water from the same aquifer. The ~~irrigation~~ well owner, under this Permit, shall control his ~~irrigation~~ withdrawals so there is not a reduction of needed water supplies in adequate domestic wells.

This approval is subject to submission and approval of required plans and specifications for wastewater treatment and disposal and water supplies facilities.

Date of first receipt of application FEBRUARY 13, 1981
Date of return to applicant for correction, amendments or changes required _____, 19____
Date of receipt of corrected application _____, 19____
Approved MARCH 25, 1981, Recorded in Book 22 Page 55

WATER RIGHT PERMIT NO. 1749-2

The Water Management Board hereby grants and issues this Water Right Permit No. 1749-2 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as qualified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is FEBRUARY 13, 1981
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before SEPTEMBER 25, 1981
3. The whole of said work is to be completed on or before 86 ~~SEP~~ MARCH 25, 1982
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is MARCH 25, 1984 ⁹⁰ ~~1984~~ ⁹⁰ ~~extended granted 12-2-81~~
5. The water appropriated shall be used for the purpose of SUBURBAN HOUSING

6. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

7. The amount of the appropriation herein granted shall not exceed 30 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for ~~beneficial use as stated~~ ~~and if for irrigation purposes said appropriation must be limited to not more than 2 acre feet per acre per year and be limited to not more than one sixteenth (1/16) of one cubic foot of water per acre of time for each acre of land to which water is actually and beneficially applied~~
SUBURBAN HOUSING
for ~~irrigation~~ on or before MARCH 25, 1984 ⁹⁰ said water to be used during the following described

annual period: CONTINUOUSLY

Witness my hand this 17TH day of APRIL, 1981

THE WATER MANAGEMENT BOARD

By

John McElroy
Chief Engineer, Water Rights

Certificate of Construction Issued _____, 19____

_____ 19____

TAYLOR DRILLING CO.

2310-12 Commerce Road
RAPID CITY, SOUTH DAKOTA 57701

RALPH L. TAYLOR, SR.
RALPH L. TAYLOR, JR. (Randy)
KIM E. TAYLOR

TELEPHONE:
Office 305-348-3500
After Hours 605-342-7119

Jan. 16, 1981

Builders Development Group JAN 19 REC'D
P.O. Box 1636
Rapid City, S.D. 57709

Attn: Mark Knecht

WELL LOG: Well off Sheridan Lake Road
Completed: 10/15/81

Total Depth 1040' 7 7/8"
1012' 7" OD Casing
Static 300 PSI 165

0-24	red sandy shale & limestone
24-58	red sandstone & limestone
58-72	red siltstone & shale
72-75	light brown sandstone
75-82	red sandstone & shale layers
82-97	light colored limestone
97-112	pinkish sandstone
112-128	limestone
128-135	sandstone
135-148	gray sandstone
148-175	multi-colored sandstone
175-181	red & white limestone
181-198	multi-colored sandstone
198-203	multi-colored limestone
203	gray sandstone
203-208	dark gray sandstone, red & white
208-215	broken sandstone
215-220	limestone
220-230	yellow sandstone
230-265	limestone yellow & brown
265-280	yellow sandstone
280-290	red sandstone soft
290-293	yellow & brown sandstone (broken)
293-295	white limestone (broken)
295-296	red siltstone-shale
296-310	white & red sandstone
310-312	red shale & siltstone
312-333	red limestone, layers red shale
333-345	red sandstone
345-360	white limestone
360-370	white limestone (broken)
370-400	brown & white limestone (broken)
over	

400-435	lost circulation(extremley broken)
435-480	hard (some fractures)
480-485	hard fractured
485-505	drilling hard, some fractures
505-565	hard some fractures
565-585	hard, fractures
585-605	hard broken
605-625	hard fractures
625-645	hard some fractures
645-660	hard
660-665	hard
665-705	hard semi-fractured
705-745	hard, tight
745-758	hard
758-805	soft
805-825	soft, some fractures
825-845	soft no fractures
845-865	hard some fractures
865-885	hard no fractures
885-905	soft w/hard layers
905-925	soft w/hard broken layers
925-945	soft w/hard broken layers
945-965	soft (shale layers)
965-985	soft (shale 975)
985-1005	hard semi-fractured
1005-1025	drilling like sandstone
1025-1040	drilling like sandstone w/hard layers

D Well Information

(1) Drill Hole, Diameter 8", Depth 1040'
 (2) Casing, Type Steel, Diameter 7", Thickness 3/8"
 (wood, concrete, steel, etc)
 (3) Screen, Type -0-, Diameter -0-, Length -0-
 (4) Gravel Pack, Thickness None, Length of gravel pack -0-

E Dugout Information or Estimates

(1) Surface dimensions, _____, Depth _____

F Fill out for Either a Well or a Dugout.

(1) Water Bearing Materials. (Attach a copy of test well log)

Depth to top of water bearing material 1012'

Depth to bottom of water bearing material ? Drilled to 1040' - Not through water bearing material

Depth to water (ground surface to water level) Static 300'

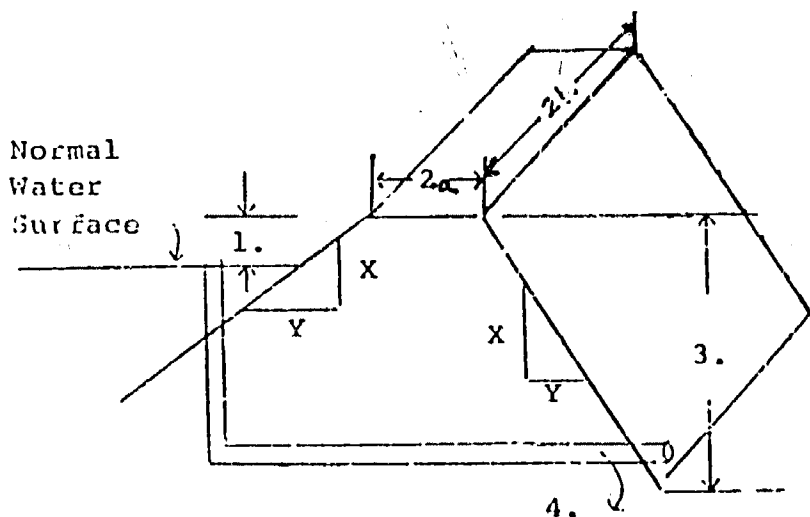
(2) Distance to nearest existing household or livestock watering well.

On same owner's property 218 rds.

On property owned by others 125+ rds.

G Water Storage Dams

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, length, maximum water depth, surface area, drainage area, storage capacity, dam slope, dimensions, location and size of outlet works, of each storage dam. The location of each water storage dam should be shown on the water right map.



1. Freeboard _____
 2a Crest width _____, b. length _____
 3. Height of Dam _____
 4. Outlet dimensions:
 Pipe diameter _____
 Spillway width _____
 X & Y slope:
 Upstream _____
 Downstream _____
 Surface area of impoundment _____
 Drainage area above dam _____

Note:

This well is No. 1 to be drilled for Phase I of Countryside Development. Phase I involves 123 units to be constructed as market demands. Storage will be added as other phases progress.

1749-2

No. _____

Publish first publication, on or before March 3, 1981

NOTICE OF HEARING ON
APPLICATION TO APPROPRIATE WATER

Pierre, South Dakota 57501

February 24, 1981

Notice is hereby given that Builder's Development Group, Inc. whose post office address is Rapid City, South Dakota, has made an application in accordance with the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-14; 46-2-9 thru 46-2-11, 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22, 46-5-41; 46-6-3, 46-6-3.1, 46-6-5, 46-6-6.1, 46-6-10, 46-6-14 and Board Rules ARSD 52:01:01:01 thru 52:01:01:13, for a permit to appropriate for beneficial use .3 cubic feet of water per second of time from groundwater (one well) through the Countryside Development, the point of diversion of which is (xxx) to be located in the S&P SW

of Section 29, Twp. 1N, Range 7E. Said water to be used for the purpose of providing water supplies for a suburban housing development

This Application No. 1749-2 will be considered by the Water Management Board at Holiday Inn, Sandy Shore Room, Watertown SD upon the 25th day of March, 1981

at 1:00 P.M. The Board is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Board decision who desires to present evidence or cross-examine witnesses according to SDCL 1-26 may notify the Board in writing prior to the hearing or orally at the hearing.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Board may be appealed to the Courts as provided by law.

Any handicapped person wishing to attend this hearing can contact the Water Rights Division, DWR, Joe Foss Building, Pierre SD, prior to the hearing date for assistance to assure access to the hearing.

WATER MANAGEMENT BOARD

cc: Builder's Development Group, Inc.
Box 1636
Rapid City SD 57709

BETTY WESTLUND
Water Rights Specialist

WHR-806A-7/74 Notice of Intent to Appropriate Water
GROUNDWATER

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County _____) ss.

I, Mary K. Garness hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Rapid City Journal

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the _____

City Rapid City
County of Pennington and State of South Dakota;
that the said notice was published in said newspaper on the following
two dates:

February 28, 1981
March 7, 1981

Mary K. Garness
(Signature)

Bookkeeper
(Title)

March 9, 1981
(Date Signed)

Feb. 28 March 7 1981 L445
NOTICE OF HEARING ON
APPLICATION TO APPROPRIATE
WATER

Pierre, South Dakota 57501
February 24, 1981
Notice is hereby given that Builder's
Development Group, Inc., whose post office
address is Rapid City, South Dakota,
has made an application in accordance
with the provisions of SDCL 46-13 thru 46-
19, 46-21; 46-29 thru 46-31, 46-33; 46-
35 thru 46-38; 46-51 thru 46-52; 46-
54; 46-63, 46-63.1, 46-65, 46-65.1, 46-65.10,
46-65.14 and Board Rules ARSD
52.01.01.01 thru 52.01.01.13 for a permit
to appropriate for beneficial use 3 cubic
feet of water per second of time from
groundwater (one well) through the
Countryside Development, the point of
diversion of which is to be located in the
SE 1/4 SW 1/4 of Section 29, Twp. 1N, Range
7E. Said water to be used for the purpose
of providing water supplies for a suburban
housing development.

This Application No. 17492 will be con-
sidered by the Water Management Board
at Holiday Inn, Sandy Shore Room,
Watertown, SD upon the 25th day of
March, 1981 at 1:00 P.M. The Board is
authorized to make a determination on
this application at the hearing. All in-
terested persons may appear and be
heard. Any person who may be affected
by a Board decision who desires to pre-
sent evidence or cross-examine
witnesses, according to SDCL 17A may
notify the Board in writing prior to the
hearing or orally at the hearing.

This hearing is an adversary pro-
ceeding. Any person has the right to be
present or to be represented by a lawyer.
These and other due process rights will
be forfeited if they are not exercised at
the hearing. Decisions of the Board may
be appealed to the Courts as provided by
law.

Any handicapped person wishing to at-
tend this hearing can contact the Water
Rights Division, DWRN, Joe Foss
Building, Pierre, SD, prior to the hearing
date for assistance to assure access to the
hearing.

WATER MANAGEMENT
BOARD
BETTY WITLUND
Water Rights Specialist



RECEIPT

WATER RIGHTS COMMISSION

State of South Dakota

N^o 4 7995

February 14, 1931

PIERRE,

RECEIVED OF Hark A. Knecht, Pres., Knecht Co., P.O. Box 1636, Rapid City, SD 57709
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit to Appropriate Water No. 17602 (examination, processing, recording and filing) -----	150	00
Fee for inspecting Construction, and issuing Cert. of Construction No. -----		
Fee for inspecting Beneficial Use, and issuing Water License No. -----		
Fee for issuing Location Certificate-Dry Draw, No -----		
Fee for filing -----		
Fee for certified copy of -----		
Fee for Print copy of map -----		
Fee for Certifying -----		
Fee for -----		
(any other work as provided by law)		
TOTAL	150	00

WATER RIGHTS COMMISSION

By *W. H. 14/20/31*
Chief Engineer, Executive Officer
(J. H. HATCH / C.E.)

1 Feb 81

1744-2

Water Management Board
Water Rights Division DW/RR

Selador, Inc.

Joe Foss Building
Betty West, Water Rights Specialist
Pierre, S.D. 57501

Dear Board Members:

I see by the Rapid City Journal of Feb 21 where the Building Development Group of Rapid City plans to build "Country Side Development" in sect. 29 TWP 6N Range 1E. I understand they plan on drilling 7 (Seven) Wells for 552 homes (2000 people)

Our ranch consists of Section 19, 20 and 30 and is contiguous with section 29. Our Well (665-666 Foot deep) is in section 19. We are concerned about our only well going dry (We had to drill it deeper about 10-15 years ago. Our springs are already dry so we would be without water for domestic use (House) and be without water for our cattle

There fore we object to the drilling of these Wells and want them to hook up to the Rapid City Water and Sewer Systems

Thank you,
H.J. Borgsmeyer

P.S. Please acknowledge receipt of this letter
Thank you
H.J. Borgsmeyer
1791 11th St
Rapid City, S.D. 57701

**South Dakota Department of
Water & Natural Resources**

Joe Foss Building Water Rights Division
Pierre, South Dakota 57501

(605) 773-3352

April 21, 1981

Builder's Development Group, Inc.
Box 1636
Rapid City, SD 57709

Dear Sirs:

Enclosed herewith is your Water Right Permit No. 1749-2 as approved by the Water Management Board authorizing you to construct your water diversion system and apply the water to beneficial use, not exceeding the limits as specified in said Water Right Permit No. 1749-2.

Also enclosed is FORM 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Water Management Board when you have completed the system and/or have put the water to beneficial use. The Board can then schedule an inspection so that your Certificate of Construction and/or Water License may be issued to you, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:bt

enclosure

You should be aware that the use of water proposed under this Permit may come under the requirements of the Safe Drinking Water Act. For information regarding this Act you should contact: Mark Steichen, Administrator, Office of Drinking Water, DWR, Foss Building, Pierre, SD 57501, Phone # 773-3754.

WNR-809-7/79

Forwarding Permit to Appropriate Water

RECEIPT

WATER RIGHTS COMMISSION
State of South Dakota

No 4 8524

October 15, 1981
PIERRE, _____

RECEIVED OF Don Knecht, Builders Development Group, Inc., Box 1636, Pierre City, SD 57701
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit to Appropriate Water No. _____ (examination, processing, recording and filing) _____		
Fee for Inspecting Construction, and Issuing Cert. of Construction No. _____		
Fee for Inspecting Beneficial Use, and issuing Water License No. _____		
Fee for Issuing Location Certificate Dry Draw. No. _____		
Fee for filling <u>Extension of Time on water permit # 1749-2</u> _____	2.	00
Fee for certified copy of _____		
Fee for Print copy of map _____		
Fee for Certifying _____		
Fee for _____ (any other work as provided by law)		
TOTAL	2.	00

WATER RIGHTS COMMISSION

By John Patch
Chief Engineer, Executive Officer
JOHN PATCH /cu

Form 18.

No. 1749-2

APPLICATION FOR EXTENSION OF TIME



TO: Water Rights
Foss Building
Pierre, South Dakota 57501

Date October 8, 1981

Dear Sirs:

In Water Right Permit No. 1749-2 it is specified that the water diversion system is to be completed by March 25, 1982 and that the water is to be put to the limit of beneficial use by March 25, 1984.

I hereby request that the date for completing the diversion system be extended to March 25, 1986 and that the date for putting the water to the limit of beneficial use be extended to March 25, 1990.

The extension of time for the completion of these works is requested for the following reasons: Because of current economic conditions, the "Countryside"
development plans have been set aside until market conditions warrant continuing.
To date, the well and casing have been completed to a depth of 1,060 feet, and
expenditures for this work have amounted to approximately \$32,000.

Enclosed herewith is a fee of Two Dollars and Fifty Cents (\$2.50) to pay the cost of filing this request for extension of time.

Don Knecht
(Signed)
Don Knecht, Partner
Water Right Permit #1749-2
Permit Number

APPROVED: 12/2/81

Board of Water Management

BY: WMB

Builders Development Group, Inc.
Box 1636, Rapid City, SD 57709



Knecht Companies

P.O. Box 1636
36 East Chicago Street
Rapid City, South Dakota 57709
Phone (605) 348-6361

July 28, 1983

Water Rights Commission
Joe Foss Building
Pierre, South Dakota 57501

Gentlemen:

Enclosed is the Notice of Completion of Works and/or Application of Water to Beneficial Use for Builders Development Group, Inc.

Please let us know what additional information you need and also the amount of your fees to complete this transaction.

Sincerely,

KNECHT COMPANIES for
Builders Development Group, Inc.



Don L. Knecht
Vice President

DLK:vw



Macon, Inc.
Housing Unlimited, Inc.
Knecht Brothers Partnership
Western Dakota Construction, Inc.
Management Agent — Sheridan Heights, Inc.

NOTICE OF COMPLETION OF WORKS AND/OR
APPLICATION OF WATER TO BENEFICIAL USEPost Office Rapid City, SDDate July 29, 1983TO: Water Rights Commission
Joe Foss Building
Pierre, South Dakota 57501

Dear Sirs:

This is to inform you that I have completed ^{First Phase} the construction of the water diversion system and/or that I have put the water to beneficial use to ^{partial} ~~maximum~~ extent it is going to be used, not exceeding the amounts as specified in Water Right No. 1749-2.

Water Right Permit No. 1749-2 states that the diversion system is to be constructed by 3-25-86, and that the water is put to beneficial use by 3-25-1990.

The diversion system was ^{partially} completed on 7-28-83. Applying the water to beneficial use was completed on 7-28-83.

You may schedule an inspection so that the Certificate of Construction and/or the Water License may be issued, thus completing my acquisition of a water right.

Builders Development Group, Inc.
Annis Cotton, Sec'y.
(Signature)

NOTE: The pump installation, water mains, fire hydrants, services to 28 lots, and a 168,000 gallon storage tank all have been constructed under inspection of the City of Rapid City. To date four houses are under construction, and the project will proceed as economic conditions will allow.



Water Rights Division
605 773-3352

1749-2

September 26, 1983

Robert Warmers, Administrator
Pennington County Health Department
725 North LaCrosse St.
Rapid City SD 57701

Dear Mr. Warmers:

Enclosed are ten copies of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". We are providing these copies for yourself, the County Commissioners and other County Officials. We are sending a copy of the Report to each of the other persons contacted during the investigation.

Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permit and to help determine if additional water permits can be approved.

Thank you for advising us of this complaint. Please let us know if you have questions on the report.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:ks

enclosures

September 26, 1983

Ms. Kathy Peters, Hydrologist
U.S. Geological Survey
Federal Building, Room 237
Rapid City, South Dakota 57701

Dear Ms. Peters:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

September 26, 1983

Ralph Taylor
Taylor Drilling Company
1720 E. Evergreen Drive
Rapid City, South Dakota 57701

Dear Mr. Taylor:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

September 26, 1983

Mrs. William Colson
Spring Canyon Estates Water Assn.
Sub. Rt.
Rapid City, South Dakota 57701

Dear Mrs. Colson:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

September 26, 1983

Bob Knecht
Builders Development Group, Inc.
Box 1636
Rapid City, South Dakota 57709

Dear Mr. Knecht:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

cc: Loo Olson
630 E. Mando
Rapid City, SD 57709

September 26, 1983

Karen Nelson
Whispering Pines Water Association
Sub. Rt., Box 131
Rapid City, South Dakota 57701

Dear Ms. Nelson:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

September 26, 1983

Marcia Dunsmore
Colonial Village Water Company
Suburban Route Box 224
Rapid City, South Dakota 57701

Dear Ms. Dunsmore:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

September 26, 1965

Ray Johnson
Sub Rt., Box 199
Rapid City, South Dakota 57701

Dear Mr. Johnson:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

September 26, 1983

Clarence and Joan Harrison
Sub. Rt., Box 155AA
Rapid City, South Dakota 57701

Dear Mr. & Mrs. Harrison:

Enclosed is a copy of "Report on Investigation of Water Supply Problem Complaint Against Countryside Development Permit No. 1749-2". Within the next several months, we expect to install an observation well in the complaint area with a continuous recorder to measure area Deadwood Formation water levels. The water level information will be useful in the event of future complaints, to help determine any water level effects from pumping under existing water permits and to help determine if additional permits can be approved.

Please let us know if you have questions on the Report.

Very truly yours,

John Hatch, Chief Engineer
Water Rights Division
Phone: (605) 773-3352

Report On Investigation of
Water Supply Problem Complaint
Against Countryside Development
Permit No. 1749-2
September 15, 1983

Water Permit No. 1749-2, Builder's Development Group, Inc. was approved March 25, 1981 to supply 0.3 cubic feet per second (135 gallons per minute) of water from one well (Deadwood Formation) for Countryside Development. A complaint letter dated July 20, 1983 was received July 26, 1983 from Joan Harrison concerning water supply problems in the Harrison well located southwest of Rapid City. This report is of an investigation conducted in the area by Division of Water Rights Engineer, Frank Smith, August 3-5, 1983. Mrs. Harrison claimed that pumping by Countryside Development was causing interference problems. A copy of her letter is attached.

The following people were contacted during the investigation:

Bob Werners - Administrator, Pennington County Health Department
Clarence and Joan Harrison
Ray Johnson
Marcia Dunsmore - Colonial Village Water Company
Karen Nelson - Whispering Pines Water Association
Bob Knecht - Builder's Development Group, Inc.
Kathy Peters - USGS Hydrologist
Mrs. William Colson - Spring Canyon Estates Water Assoc.
Ralph Taylor - Taylor Drilling Co.

Water levels were measured August 3 & 5 at the Harrison and Johnson wells, and August 5 at the Countryside well. The following table lists measurements and the approximate water level elevations.

Date	Well	Location	Measured Depth to Water	Water Level Topographic Elevation
August 3	Harrison	IN 7E 31 ABBA	476'	3604
August 5	Harrison	IN 7E 31 A3AA	466'	3614
August 3	Johnson	IN 7E 31 AAAA	474.5'	3615.5
August 5	Johnson	IN 7E 31 AAAA	476.7'	3613.3
August 5	Countryside	IN 7E 29 CDD3	306'	3614

By comparing the water level elevations of the three wells, it is apparent that they were completed into the same water bearing formation. Ralph Taylor stated that all three of the wells penetrated the Deadwood Sandstone formation, which is the deepest water bearing formation in this area. The top of the Deadwood Sandstone occurs 500-800 feet below land surface according to available drillers logs, and dips about 10° to the East (Dr. Perry H. Rahn "Effect of Ground Water Withdrawals at Countryside Development, Pennington Co. SD", 1981). The formation is made up of interbedded sandstone, conglomerate, and shale. (Rahn)

Current annual water use by the five existing water distribution systems in the Countryside Development area, and projected use by Countryside Estates, were reported as follows:

Water Distribution System	Permit No.	Pumping Rate*		No. of Wells	No. of Houses Served	Gallons of Storage	Acro Feet per Year***
Colonial Village Water Co.	1726-2	Permit 225	Actual 125	4	170	100,000	75
Whispering Pines Water Co.	no permit		< 18 **	1	16	20,000	7
Ray Johnson Water System	no permit		12	1	8	2,000	4
Spring Canyon Estates	no permit		< 18	3	26	not reported	12
Clarkson	Incorporated into 1726-2		< 18	1		not reported	10
Projected Use By Countryside Estates	1742-2	135	102	1	150	168,000	.67
Totals		360	293	11	370		175

* gallons per minute

** < 18 is less than 18 gallons per minute

*** one acre foot = 325,850 gallons

SDCL 46-5-9 requires that a Water Distribution System which diverts (pumps or well flows) more than 18 gallons per minute (gpm) have a water permit. Four of the five existing water distribution systems divert less than 18 gallons per minute. While these four systems are not required by Law to have water permits, such systems are encouraged to obtain permits. If the diversion rate is expected to exceed 18 gallons per minute in the future. Acquiring a water permit will establish a priority for the system that later expands. Water distribution systems diverting 18 gpm or less receive the same domestic preference and protection as a homeowner supplied by his own private well. If diversion rates exceed 18 gpm, then water rights are required and protection from impairment of the aquifer water supply is based upon priority. The water right with the earliest priority date has the first right to water over water rights with later priority dates.

According to information provided by Bulldor's Development Group, a total of 435,800 gallons of water had been pumped from the Countryside Estates well by July 25, 1983. About 100,000 gallons were pumped prior to July 11, 1983 for backfilling and cleanup operations while the water mains were being constructed. The remaining 335,800 gallons were pumped between July 11 and July 25 for disinfecting and testing of the distribution system. It was reported that the storage reservoir was filled to overflowing during the disinfection procedure, and that water was allowed to flow to waste. This problem has been corrected.

The Countryside well was not pumping during the investigation, so the drawdown effect could not be measured directly. A distance drawdown plot was constructed based on the following assumptions: (1) The Deadwood formation is an artesian aquifer having no hydraulic interconnection with overlying formations. (2) There are no boundary conditions within the radius of influence of the Countryside well. (3) Transmissivity (T)=3,000 gpd/ft and storage coefficient (S)= 1.0×10^{-4} are based upon typical values for an artesian aquifer.

The distance - drawdown plot indicates that given the assumed values for (T) and (S), the water level in the Harrison well would be drawn down about 21 feet after one year of continuous pumping by the Countryside well, and 24 feet after two years of continuous pumping. The Johnson well would be drawn down 24 feet after one year of continuous pumping and 27 feet after two years. These calculations represent extreme conditions that are not expected to occur, and assume no recharge to the Deadwood Formation which is unlikely.

The temporary drawdown in nearby wells resulting from the pumping of the Countryside Estates well is caused by lowering of the aquifer artesian head pressure in the area of the Countryside well. The volume of water involved in the lowering of artesian pressure is only a small percentage of the total volume of water stored in the aquifer. Excessive fluctuations in water levels, caused by pumping wells with 125 gpm or smaller pumps and the projected annual use by Countryside Estates, is not expected.

Available information about wells in this area indicates that while a well is pumping, the water level inside the well may be drawn down several feet before stabilizing. After several hours of pumping at 102 gpm, the drawdown inside the Countryside well was measured at 162 feet below the static water level. The drawdown stabilized at 162 feet, and did not increase with continued pumping.

When the Harrison well was measured while pumping, the water level was only seven feet above the original pump setting. A few feet of fluctuation in the water level (head pressure) due to pumping by Colonial Village prior to July 11 could have lowered the level enough to cause water shortage problems for the Harrison's. After July 11, continuous pumping by Countryside would have caused additional lowering of head pressure. A lower water level may have decreased the gallons per minute produced by the pump. Production decreased as the water level was lowered even though the water level in the well was above the pump.

Because of the limited information available about the hydrologic characteristics of the Deadwood formation, an estimate of water availability was made based on an aerial coverage of 9 square miles surrounding the Countryside well, an average saturated sandstone thickness of 50 feet, and a specific yield figure of 0.10. Based upon these assumptions, the total volume of recoverable water available in the study area is at least 28,800 acre feet.

Current annual use accounts for 0.4% of the estimated recoverable storage. The additional use by Countryside will increase the annual consumption to 0.6% of the storage. Even though fluctuations in water levels (head pressure) occur in area Deadwood Formation wells, the availability of water in the formation has not been impaired, nor is impairment expected with projected annual pumping.

Conclusions

1. The Countryside Estates water supply well was completed into the same water bearing formation as the Harrison and Johnson wells.
2. Based upon the assumed values for (T) and (S), the water supply available to the Harrison and Johnson wells will not be impaired by pumping the Countryside well.
3. The volume of water involved in the artesian head pressure is only a small percentage of the total volume of water stored in the aquifer. Authorized water permits for area Deadwood Formation wells will cause drawdowns of artesian pressure that involve only a small fraction of this small percentage.
4. SDCL 46-6-6.1 does not require the head pressure in a well to be protected, although the Water Management Board when considering a water permit application must consider and balance the public interest question of head pressure versus any affect upon nearby domestic wells.
5. Existing Deadwood Formation water permits can be utilized without jeopardizing the supply of water in the Formation.
6. It would be a waste of the State's water resources to restrict water use by existing water permits in order to protect a few feet of artesian head pressure in the Harrison and Johnson wells.
7. More information is needed to accurately determine the hydrologic characteristics of the Deadwood formation in this area.

Recommendations

1. That Water Permit No. 1749-2 should not be restricted and that use of water authorized by the permit be allowed to continue.
2. That an observation well be drilled in the area to accurately monitor water level fluctuations.
3. That those water distribution systems which may divert more than 10 gallons per minute in the future, obtain water permits to establish priority in the event it is necessary to deny additional water permit applications for Deadwood Formation wells, or restrict water use.

Frank Smith

Frank Smith
Natural Resource Engineer

C91601jh.wr

Clarence & Joan Harrison
Sub. Rt. Box 156 AA
Rapid City, SD 57701
July 20, 1983

To: Countryside Land Development
Pennington County Commissioners
Rapid City Journal

Regarding Well Draw-Down in area adjacent to the Countryside Land Development located on Sheridan Lake Road.

Gentlemen:

The 1st week of July 1983, we noticed that the pump in our private well had very little volume and that our water would actually cease running periodically. The well was rated at from 30 to 35 gallons a minute when dug in 1975, and the 3-horse pump would pump 18 gallons a minute at the depth of 483 ft. in a 960 ft. well.

On the 11th of July, we installed a new pump and an additional 63 ft. of 1½" pipe which extended the pump to 546 ft. This work cost about \$2000 and took the system to the limits of its design. (More work would mean resizing the pump, pipe, and wire at a much increased cost.) We were disappointed to find that the situation had been only partially remedied and that the pump we had replaced turned out to have been perfectly operable. It gradually improved over the next few days, but the flow has been reduced to about 10 gallons a minute.

On July 19th, neighbor Ray Johnson of this area called to say that he had heard of our difficulty and to tell me that his well which serves eight families had needed to have the pump extended 100 ft. to the 635 ft. level and was not appreciably helped. He had discovered that the Countryside Development had filled their 176,000 gallon reservoir, dumped it to clean the system, filled and then overfilled it - apparently without a float system installed.

Since the Countryside reservoir is intended to serve at least 123 units at the development as projected we feel that this situation could occur again in the future and that the existing water systems in the area could be in serious jeopardy despite a study claiming to show that no wells in the area would be affected. We know that at least two will certainly be.

We urge that this situation be carefully monitored before it is too late for remedies, and water is again an elusive commodity for many families.

Respectfully yours,

Joan Harrison
Joan Harrison
(Mrs. Clarence A. Harrison)





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

JUN 11 1997

2056-2

Christina H. Sanchez, President
Countryside Homeowner's Association
5095 Waxwing Lane
Rapid City, SD 57702

Dear Ms. Sanchez:

Enclosed is Water License No. 2056-2. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 413919 in the amount of \$50.00 which you paid for the investigation and issuance of the Water License.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 2056-2, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Law provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Very truly yours,

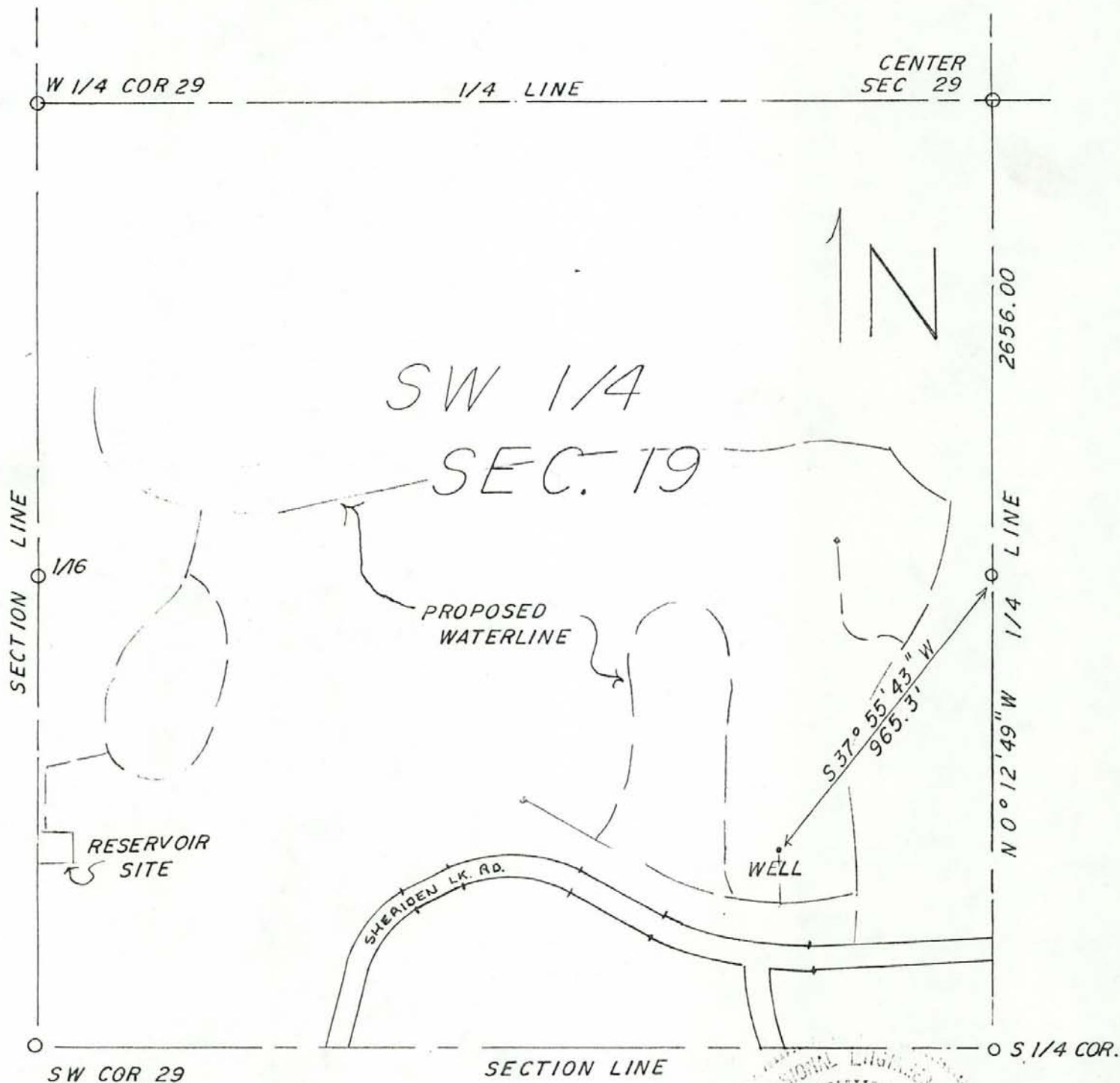
JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

gm
enclosures

NOTE: The applicable portions of Water Permit No. 1749-2 (transferred to Countryside Homeowner's Association) has been incorporated into this Water License No. 2056-2.

WELL LOCATION AND PROPOSED WATER LINE LOCATIONS

SW 1/4 SECTION 29, T1N, R7E, BHM
Pennington County, South Dakota



Jimmy Wilson
S.D. Land Surveyor
No. 2696
2/2/81



Map # ~~1505-3~~ Appl. 1749-2