



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098

Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

February 17, 2004

SPRINGDALE ACRES HOMEOWNERS ASSOCIATION
C/O RICHARD K SMITH
PO BOX 910
BURLEY ID 83318

RECEIVED
FEB 19 2004
Department of Water Resources
Southern Region

RE: PERMIT NO. 45-13513

Dear Permit Holder:

I have enclosed a copy of the approved Request for Extension of Time ("request") you submitted to the department in connection with the above referenced permit, which extends the time to submit proof of beneficial use to **April 1, 2005**. Please note that the department granted this extension based on evidence of **due diligence**. It is important that you work diligently toward the completion of this project during the construction period allowed, since the department may not be able to grant an additional extension request based on this category.

Section 42-248, Idaho Code requires you or the owner of this water right to maintain current ownership and address records on file with the department. Please contact any office of the department for the proper form to file a change of ownership of a water right and/or a change in the address of the owner. Additionally, these forms can be found on our website at: www.idwr.state.id.us

If you have any questions regarding this matter, contact me at (208) 327-7953.

Sincerely,

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Allocation Bureau

Enclosure

c: IDWR - Regional Office

45-13513

Comment Report

45-13513

1. jstanton 1/30/2003 Comment/Analysis

Comment: This application covers the over-use of the existing rights discovered by the watermaster. Applicant has provided data indicating that the proposed uses are non-consumptive and therefore exempt from the present moratorium on new consumptive uses. The original application showed 2 wells in the same tract as licensed, but GPS data from the water district shows the wells to be in two separate tracts; the application has been corrected to reflect this. The application appears to be processible and approvable if the Brockway data is accepted as correct.

2. jstanton 1/30/2003 Legal Notice Remarks

Comment: This application proposes to allow additional water for non-consumptive heating and cooling uses in an existing subdivision located about 5 5/8 miles east of the Hwy. 27/30 interchange on Hwy. 81. The water will be pumped from 2 existing wells to 11 lots.



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics

Hydrology

Water Resources

RECEIVED

JAN 29 2003

Department of Water Resources
Southern Region

January 28, 2003

Idaho Department of Water Resources
Attn: Jim Stanton
1341 Fillmore Street, Suite 200
Twin Falls, ID 83301

Re: Springdale Acres HOA Permit #45-13513

Dear Jim:

Enclosed are signed documents which should allow further processing of the non-consumptive water permit application for Springdale Homeowners Association. Included with this letter is the signed application revised by IDWR to reflect the two wells in separate quarter quarter sections. The application has been signed by Richard K. Smith who is the secretary for Springdale HOA.

Also included with this submittal is a form stating the names and addresses of the board members for Springdale Acres HOA. These documents were required to allow further processing of the permit application.

We have also included a limited power of attorney form which will allow us to sign documents and make changes on behalf of Springdale HOA for this permit application.

Please review the enclosed documents and contact me if you have any questions or comments. It is our understanding that processing of this application may proceed with the submittal of these documents. Thank you and have a great day.

Sincerely,

Jeffrey S. Rau, P.E.

CHARLES E.
BROCKWAY,
PH.D., P.E.

CHARLES G.
BROCKWAY,
PH.D., P.E.

2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

Attachment: Signed Revised Application
Board of Director List with Addresses
Limited Power of Attorney Form

Cc: Richard K. Smith – Secretary



State of Idaho

DEPARTMENT OF WATER RESOURCES

1341 Fillmore Street, Suite 200, Twin Falls ID 83301-3380

Phone: (208) 736-3033 FAX: (208) 736-3037

SOUTHERN REGION

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

January 13, 2003

Brockway Engineering PLLC
ATTN: Jeff Rau
2016 N Washington St Suite 4
Twin Falls, ID 83301

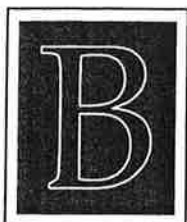
RE: App For Permit 45-13513, Springdale Acres Home Owner Assoc.

Dear Jeff;

Per our conversation, I have prepared a corrected application showing the two existing wells in two separate tracts. If the application is satisfactory, please have the applicant sign it and return it to this office for continued processing. Also as we discussed, please provide a list of names and addresses for the officers of the home owners' association.

Regards,

James E. Stanton
Sr. Water Resource Agent



BROCKWAY
ENGINEERING
P.L.L.C.

Hydraulics

Hydrology

Water Resources

December 4, 2002

Idaho Department of Water Resources
Southern Regional Office
1341 Fillmore, Suite 200
Twin Falls, ID 83301

RECEIVED
DEC 06 2002
Department of Water Resources
Southern Region

Re: Springdale Acres Homeowners Association
Application for Non-Consumptive Water Right Permit

To Whom It May Concern:

Enclosed is a permit application for a non-consumptive water right permit submitted on behalf of Springdale Acres HOA. The subdivision has experienced reported annual water usage above their irrigation and domestic rights which is attributed to heat pumps connected to their domestic community water system. The enclosed non-consumptive water right permit requests the right to divert groundwater from their existing wells and utilize 0.29 cfs and up to 67 AFA for heating and cooling in the heat pump systems. Return flow is directly to the Snake River which is directly adjacent to the two wells servicing the system. No portion of the water used in the heat pumps is consumptively used.

Please review the enclosed permit application and supporting documentation and begin the processing of this application. Please contact our office if you have any questions or comments. We have enclosed a check in the amount of \$250.00 according to the IDWR fee schedule. Thank you and have a great day.

CHARLES E.
BROCKWAY,
PH.D., P.E.

Sincerely,

CHARLES G.
BROCKWAY,
PH.D., P.E.


Jeffrey S. Rau, P.E.

Attachment: Springdale Acres HOA – Permit Application & Documents
Brockway Engineering Check \$250

Cc: Richard K. Smith

2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

REQUEST FOR EXTENSION OF TIME
TO PROVIDE ADDITIONAL TIME IN WHICH TO SUBMIT PROOF OF
BENEFICIAL USE FOR A WATER RIGHT PERMIT

The Idaho Department of Water Resources will consider this form as a request that the permit holder(s) be granted an additional period of time under the provisions of Section 42-204, Idaho Code in which to complete development of a water right.

Permit No.: 45-13513

Name(s) of Permit Holder: Springdale Acres Homeowners Association c/o Richard K. Smith

Mailing Address: P.O. Box 910 Burley, ID 83318

Date Proof is Due: April 1, 2004 Telephone No.: 208-878-8382

Describe what work has been completed toward the development of this water right:
(This must be filled out! If no work has been completed, show "none".)

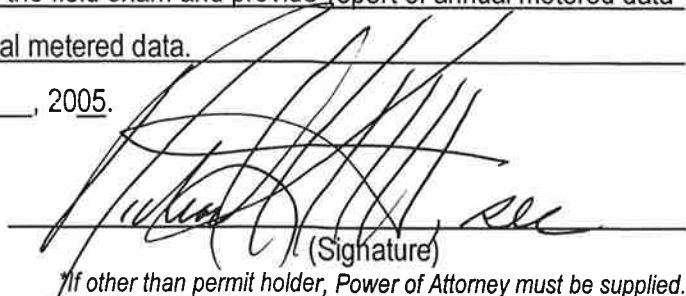
Delivery system to heat pumps was already in place. Heat pumps in occupied residences already in place prior to
issuance of permit. Individual flowmeters have been installed on all heat pump systems in July 2003 with monthly
readings of meters starting at time of installation. All capital improvement for permit compliance completed in July
2003. Costing \$ n/a

The permit holder(s) has been unable to complete the remainder of the work for the following reasons:

Permit holder requests extension of time for beneficial use exam to allow for a minimum of 1 full year of meter data to
be collected prior to exam. Brockway Engineering to conduct the field exam and provide report of annual metered data
to establish allowable annual diversion volume based on actual metered data.

Permit holder(s) request an extension to April 1, 2005.

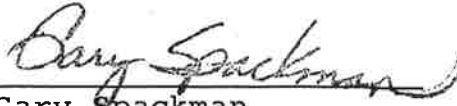
FEE \$ 50.00


(Signature)
If other than permit holder, Power of Attorney must be supplied.

ACTION OF THE DEPARTMENT OF WATER RESOURCES

IT IS HERBY ORDERED that the above request for extension of time be

APPROVED and the time within which to submit proof of beneifical use
is extended to April 1, 2005.

Signed this 13th day of February, 2004. 
Gary Spackman

S ✓

State of Idaho
Department of Water Resources
Permit to Appropriate Water
NO. 45-13513

Priority: December 06, 2002

Maximum Diversion Rate: 0.29 CFS

This is to certify, that SPRINGDALE ACRES HOMEOWNERS ASSN INC
C/O RICHARD K. SMITH
PO BOX 910
BURLEY ID 83318

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

RECEIVED
MAR 25 2003
Department of Water Resources
Southern Region

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
COOLING	01/01 to 12/31	0.29 CFS
HEATING	01/01 to 12/31	0.29 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER	L1 (NE¼NE¼NW¼)	Sec. 31, Twp 10S, Rge 24E, B.M. CASSIA County
GROUND WATER	L2 (SE¼SE¼SW¼)	Sec. 30, Twp 10S, Rge 24E, B.M. CASSIA County

PLACE OF USE: COOLING

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S 24E 30												X				X	
10S 24E 31		X			X							L2				L2	

PLACE OF USE: HEATING, same as Cooling

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **April 1, 2004**.
2. Subject to all prior water rights.
3. Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
4. Use of water under this right shall be non-consumptive.
5. Prior to the diversion and use of water under this approval, the right holder shall comply with applicable water quality standards of the Department of Environmental Quality.
6. The right holder shall measure and annually report diversions of water and/or other pertinent hydrologic and system information as required by Section 42-701, Idaho Code.
7. Any license issued by IDWR pursuant to the right or portion thereof for the use of trust water is subject to a term review of 20 years after the date of this approval to determine availability of water for the use and to re-evaluate the public interest at the end of the term.
8. Heating and cooling uses are for heat pump systems for 11 residences.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this 20th day of March, 2003.

for 
KARL J DREHER, Director

45-13513

Springdale Acres HOA Site Vicinity Map

Snake River - Milner Lake

Springdale Acres Subdivision

Springdale

Springdale Sch

Portions of Sections 30 & 31
Township 10 South, Range 24 East

PACIFIC ROAD

550 EAST ROAD

30s

4150, 4187, 4190, 4198, 4203, 4204

45-13513

Page 1

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 45-13513

Priority: December 06, 2002

Maximum Diversion Rate: 0.29 CFS
Maximum Diversion Volume: 67.0 AF

This is to certify, that SPRINGDALE ACRES HOME OWNER ASSOC
C/O RICHARD K. SMITH
PO BOX 910
BURLEY ID 83318

has applied for a permit to appropriate water from:

Source: GROUND WATER

and a permit is APPROVED for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>	<u>ANNUAL VOLUME</u>
COOLING	01/01 to 12/31	0.29 CFS	67.0 AF
HEATING	01/01 to 12/31	0.29 CFS	67.0 AF

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER L1 (NE1/4NE1/4NW1/4) Sec. 31, Twp 10S, Rge 24E, B.M.
CASSIA County

GROUND WATER L2 (SE1/4SE1/4SW1/4) Sec. 30, Twp 10S, Rge 24E, B.M.
CASSIA County

PLACE OF USE: COOLING

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S 24E 30												X				X	
10S 24E 31		X			X							L 2				L 2	
					L 1												

PLACE OF USE: HEATING

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
10S 24E 30												X				X	
10S 24E 31		X			X							L 2				L 2	
					L 1												

CONDITIONS OF APPROVAL

1. Proof of application of water to beneficial use shall be submitted on or before **April 01, 2004**.
2. Subject to all prior water rights.
3. Use of water under this right shall be non-consumptive.

45-13513

State of Idaho
Department of Water Resources
Permit to Appropriate Water

NO. 45-13513

4. Prior to the diversion and use of water under this approval, the right holder shall comply with applicable water quality standards of the Department of Environmental Quality.
5. After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
6. The right holder shall measure and annually report diversions of water and/or other pertinent hydrologic and system information as required by Section 42-701, Idaho Code.
7. Any license issued by IDWR pursuant to the right or portion thereof for the use of trust water is subject to a term review of 20 years after the date of this approval to determine availability of water for the use and to re-evaluate the public interest at the end of the term.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code. Witness the signature of the Director, affixed at Boise, this _____ day of _____, 20_____.

KARL J DREHER, Director

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

Ident. No. 45-13513
70336
RECEIVED
DEC 06 2002
Department of Water Resources
Southern Region

To appropriate the public waters of the State of Idaho

1. Name of applicant Springdale Acres HOA c/o Richard K. Smith Phone 208-878-8382
Post Office address P.O. Box 910 Burley, ID 83318
2. Source of water supply Groundwater which is a tributary of n/a
3. Location of point of diversion is 1/4 of SE 1/4 of SW 1/4, Govt. Lot 2
Sec. 30 Township 10S Range 24E B.M. Cassia County; additional
points of diversion, if any: Two wells in same quarter quarter section.
4. Water will be used for the following purposes:
Amount 0.29 cfs for Cooling purposes from 1/01 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount 0.29 cfs for Heating purposes from 1/01 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount 67 AFA for Cooling purposes from 1/01 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount 67 AFA for Heating purposes from 1/01 to 12/31 (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity being appropriated is (a) 0.29 and/or (b) 67.0
cubic feet per second acre-feet per annum
6. Proposed diverting works:
 - a. Description of ditches, flumes, pumps, headgates, etc. 2 Groundwater wells to pressurized distribution system. Individual homeowner service connections with individual heat pump systems on maximum 11 lots in subdivision.
 - b. Height of storage dam 0 feet; active reservoir capacity 0 acre-feet; total reservoir capacity 0 acre-feet; period of year when water will be diverted to storage: 0 to 0 inclusive.
 - c. Proposed well diameter is 0 inches; proposed depth of well is 0 feet
 - d. Is groundwater with a temperature of greater than 85 degrees being sought? No
 - e. If well is already drilled, when? 0; Drilling firm 0;
Well was drilled for (well owner) Springdale Acres HOA - Community Wells
7. Time required for completion of works and application of water to proposed beneficial use is 0 years (minimum 1 year)
8. Description of proposed uses (if irrigation only, go to item 9):
 - a. Hydropower; show total feet of head and proposed capacity in KW. 0
 - b. Stockwatering; list number and kind of livestock. 0
 - c. Municipal; show name of municipality. 0
 - d. Domestic; show number of households 0;
 - e. Other; describe fully. Non-consumptive heating & cooling in domestic heat pump systems
8 Existing heat pump systems with expansion to 11 systems total at full build-out.

9. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RANGE	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				TOTALS
			NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	NE 1/4	NW 1/4	SW 1/4	SE 1/4	
10S	24E	30												G/L			G/L		
														Lt 2			Lt 2		
10S	24E	31		G/L			G/L												
							Lt 1												

Total number of acres to be irrigated _____

10. Describe any other water rights used for the same purposes as described above. 45-7697 & 45-7375
Domestic & Irrigation Rights for Community Water System

11. a. Who owns the property at the point of diversion? Springdale Acres HOA

b. Who owns the land to be irrigated or place of use? Individual Lot Owners

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: Members of Springdale Acres homeowners association. Community owned water distribution system for domestic, irrigation, & heat pump use.

12.. Remarks: Water diverted for heat pump use is non-consumptive and returned directly to Snake River system. Wells are approximately 200 feet from Snake River. Gradient is from Snake River to wells.

13. MAP OF PROPOSED PROJECT ATTACHED _____ show clearly the proposed point of diversion, place of use, section number, township and range number.

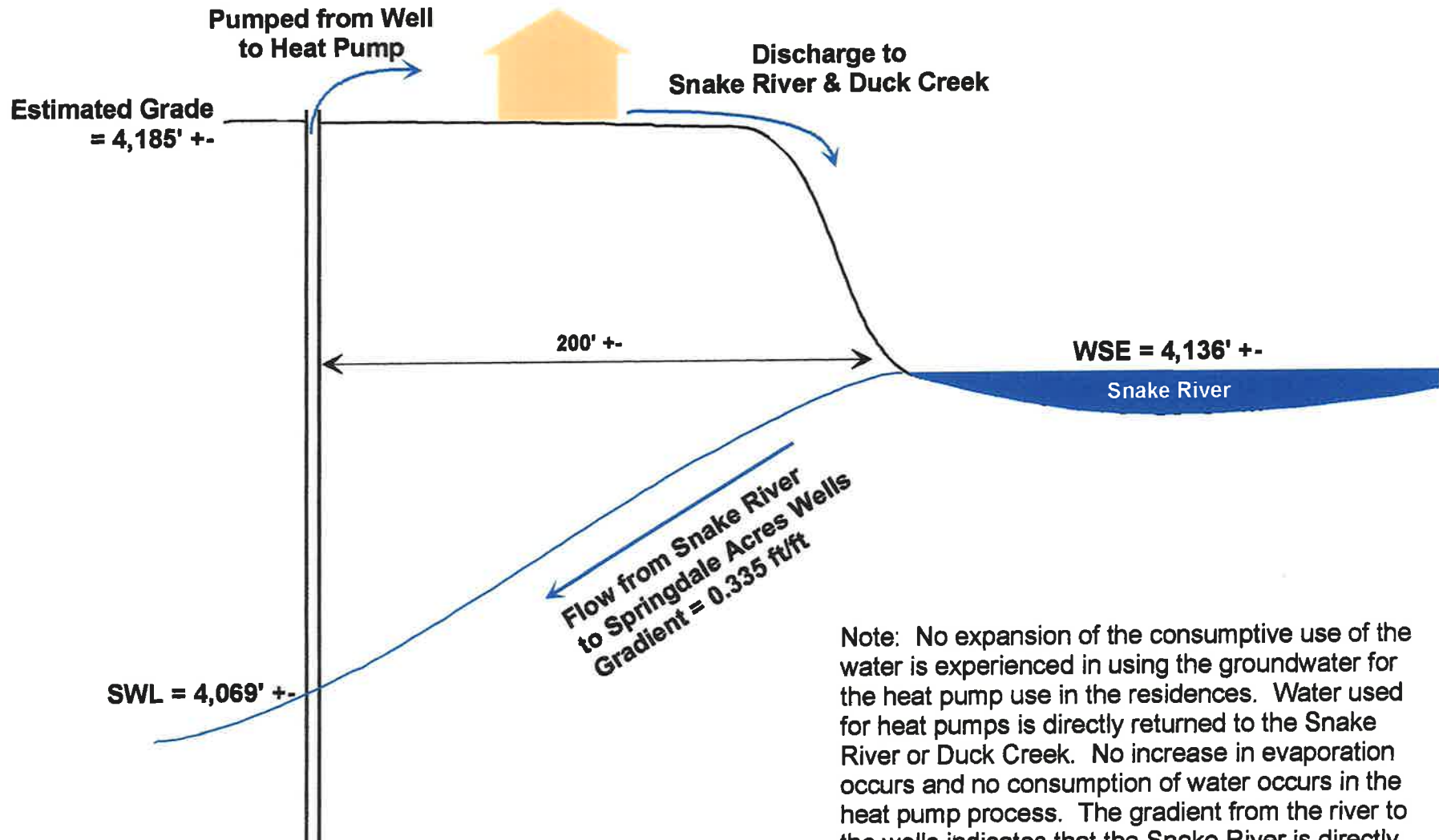
BE IT KNOWN that the undersigned hereby makes this application for permit to appropriate the public waters of the State of Idaho as herein set forth.

Springdale Acres Homeowners' Association

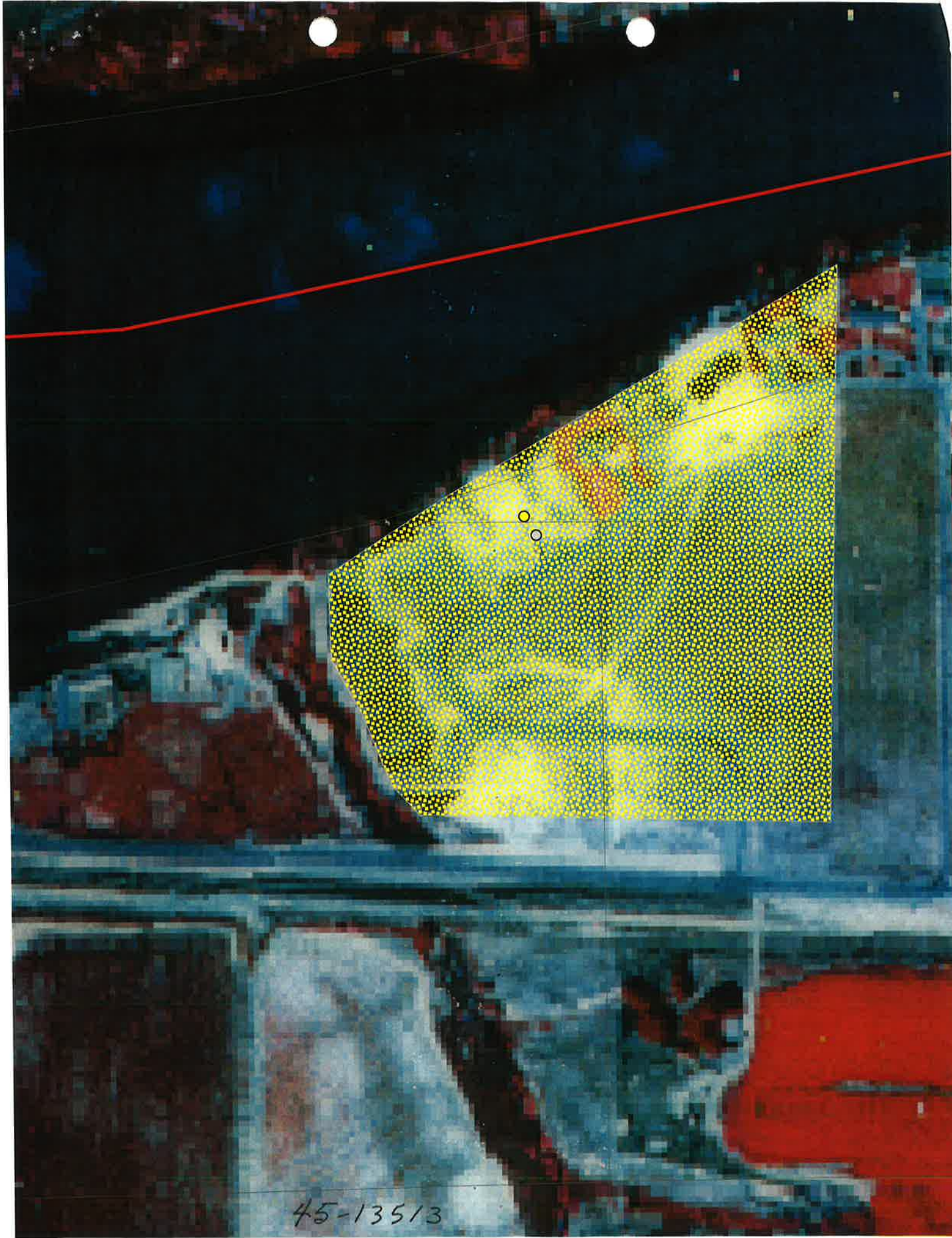
By: [Signature] sec.
 (Applicant)

Received by [Signature] Date 12-6-02 Time noon Preliminary check by _____
 Fee \$ 250.00 Received by [Signature] # 5025356 Date 12-6-02
 Publication prepared by [Signature] Date 1/31/03 Published in So. Ill Press
 Publication approved [Signature] Date 2/20/03

Springdale Acres HOA Non-Consumptive Water Right Permit Application



Note: No expansion of the consumptive use of the water is experienced in using the groundwater for the heat pump use in the residences. Water used for heat pumps is directly returned to the Snake River or Duck Creek. No increase in evaporation occurs and no consumption of water occurs in the heat pump process. The gradient from the river to the wells indicates that the Snake River is directly contributing to the well as shown on the diagram.



45-13513

**Springdale Acres HOA
Supporting Narrative – Application for Permit
Non-consumptive Heating/Cooling Permit**

RECEIVED
DEC 06 2002
Department of Water Resources
Southern Region

Narrative

Springdale Acres is a 22 lot subdivision located in Sections 30 & 31, Township 10S, Range 24 East, B.M. The subdivision sits atop a bench overlooking the Snake River approximately 3.5 miles West of Declo, Idaho. A vicinity map is included with the permit submittal. The subdivision contains 22 lots individually owned and governed by a homeowners association. See subdivision map included with submittal. The association provides domestic and irrigation water from two deep wells located on a commonly owned well lot within the subdivision located between Lots 5 & 6 of Block 1. The wells discharge to pressure storage tanks connected to a buried pressure mainline servicing the individual lots. Individual service connections are not metered, however the main supply line to the system contains a 4" McCrometer impeller type meter which is used for reporting to the West ESPA Measurement District.

Two water rights are currently owned by Springdale Acres HOA. Water right #45-7375 is a 0.12 cfs decreed groundwater right for domestic use to 22 lots within Springdale Acres Subdivision. The priority date of this right is 4/12/1979 and the diversion volume allowed for domestic use is 26.4 acre feet per annum (AFA). The second right (45-7697) is a groundwater license for domestic and irrigation use within the subdivision. Based on this right 0.22 cfs may be used for irrigation with an annual diversion volume of 30.8 AFA. Under this right, 0.09 cfs may be diverted from groundwater for domestic use to the homes. The remarks on this right allow diversion of the rights from two wells located within Lot #2 (SE SW), Section 30, T10S, R24E. The total diversion rate when combined shall not exceed 0.43 cfs nor a combined diversion volume of 57.2 AFA.

The following table shows the recorded annual diversion volume as reported to the WEST ESPA Measurement District.

Year	Metered Water Usage (ac-ft)	Amount Exceeded (ac-ft)
1998	67.2	10.0
1999	85.5	28.3
2000	96.1	38.9
2001	77.7	20.5

As shown in the table above, Springdale Acres HOA has consistently exceeded is diversion volume for the past four reporting years. This has come under scrutiny of the measurement district and Brockway Engineering was retained by the association to evaluate water usage at the subdivision and assist in associated water rights issues.

In April 2002, Jeffrey S. Rau, P.E. of Brockway Engineering completed a field evaluation of the subdivision and water system to verify the accuracy of the 4" McCrometer used to report diversion volume to the measurement district. The flow meter on the distribution system is a 4" diameter McCrometer in-line flow meter (Serial #97-8151-4). The flow meter has instantaneous dial read-out and totalizing counter. To evaluate the performance of this meter, a non-invasive strap-on ultrasonic flow meter was utilized (Fuji Meter). The Fuji meter was placed upstream of the McCrometer. The flow meter was checked for both instantaneous and totalizer accuracy over a 15 minute flow test. For the purposes of this test, a drain valve from the system was opened to allow the well pumps to run continuously during the test. During the flow test, the instantaneous reading from the McCrometer was 163 gpm which agreed within 1-2 gpm with our Fuji Meter. Over the 15 minute flow test, both meters were within 0.85% of each other which is very good. The accuracy of the Fuji meter is considered to be within 0.5% from true flow. Based on our measurements, the McCrometer is performing well within its stated accuracy and well within IDWR limits. It is our opinion that the flow meter is accurately reporting the volumes and flow rates reported to IDWR.

As part of our evaluation, we evaluated the possibility of a leak in the system which could account for the large amount of water use in the system. Visual inspection of the property did not reveal any large leaks or suspect areas where leaks could be occurring. It is not likely that a leak is responsible for the overuse of water since the overuse has occurred for at least 4 years and would surely be visually evident in that time.

The West ESPA Measurement District has been concerned that the overuse of water may be attributed to over-irrigation of landscaping in the subdivision. Based on our field evaluation and an estimate of the irrigated area within the subdivision, approximately 9.85 acres are irrigated from the community water system (See spreadsheet calculation). This area includes lawns surrounding homes and several adjacent lots which do not contain homes but are irrigated with domestic systems. The water rights allow 11 acres of irrigation which is within the amount currently being irrigated. Based on the regional ET for turf and an irrigation efficiency of 65%, we estimated that the maximum amount attributed to irrigation would be approximately 42.3 acre feet which is still below the amount allowed under the remarks section of Water Right #45-7697. While it is possible that some irrigation systems are over-watering, it is not likely the cause of the continuous over-use of water under their rights. As a further analysis, we used metered data from January through April in 2001 & 2002 which are periods when sprinkler irrigation was not occurring. Using the number of occupied homes and an average daily use of approximately 300 gallons per day per home, we compared the predicted usage against the actual metered amount reported to the measurement district. During these periods, the actual water usage was 900% to 1,100% greater than that predicted based on average daily domestic in-house

use. See attached calculation. This further supports our claim that the irrigation water is not the cause of the diversion amounts in excess of the permitted limits.

At the present time, 8 homes which are located on the bench and adjacent to Duck Creek, have heat pumps attached to their domestic service lines. The heat pumps utilize the thermal characteristics from the groundwater for cooling in the summer and heat during the winter. The heat pumps utilize water from the domestic connection to the house and discharge directly to the Snake River and Duck Creek, just upstream of its confluence with the Snake River. Several heat pump outlet pipes were observed operating during our site visit to the subdivision. In one residence, we were able to observe a flowmeter located on the supply line to the heat pump. The meter was a simple floating cone type meter and did not have any totalizing capability. Observed flow rate on this meter was about 9 gallons per minute (gpm). On another outlet pipe, we were able to measure the discharge from the heat pump which was approximately 10 gpm. According to an homeowner in the subdivision, the heat pumps can operate as high as 12 gpm, but on average run 9-10 gpm during operation. Using the number of known heat pump units (8) and the excess water observed during the non-irrigation periods in 2000 & 2001, we estimated that the heat pumps would need to run approximately 10 hours per day to account for the amount of water recorded during those periods (See attached calculations). This is not unrealistic given the time of the year and climate in this area. Based on this information, it was the conclusion of Brockway Engineering that the reason for the excess diversion volumes recorded in previous years was directly attributed to the heat pumps.

Since the water rights allow for domestic and irrigation use only, Springdale Acres HOA has applied for a non-consumptive right for heating and cooling purposes. Based on the enclosed calculation sheet, at full build-out, the system is expected to require 0.29 cfs and up to 67 AFA for heating and cooling purposes. This amount has been requested in the permit application. The water would be supplied to the heat pump systems via the domestic connections to the houses. The domestic system is fed by two groundwater wells located as described earlier in the narrative. As part of the permit request, Springdale Acres HOA would install totalizing flow meters on each heat pump service line and would track annual use of the non-consumptive water right. Springdale Acres would read all meters on an annual basis and supply the information to the West ESPA Measurement District along with the other flow data for the domestic and irrigation use. If this is done correctly, it will be possible to track the non-consumptive use of the heat pump systems and assure that the two other water rights appurtenant to the subdivision are used correctly.

The wells are located approximately 200 feet directly south of the Snake River. Based on the USGS topographic map and measurements made on site of the wells, the gradient from the Snake River to the wells is approximately 0.33 ft/ft indicating that the flow is from the Snake River to the wells. Water withdrawn

Springdale Acres HOA
Water Permit Application - Narrative

from the aquifer in this area and used in the heat pump systems would be returned directly to the Snake River and Duck Creek and therefore would be non-consumptive and allowed under the current moratorium.

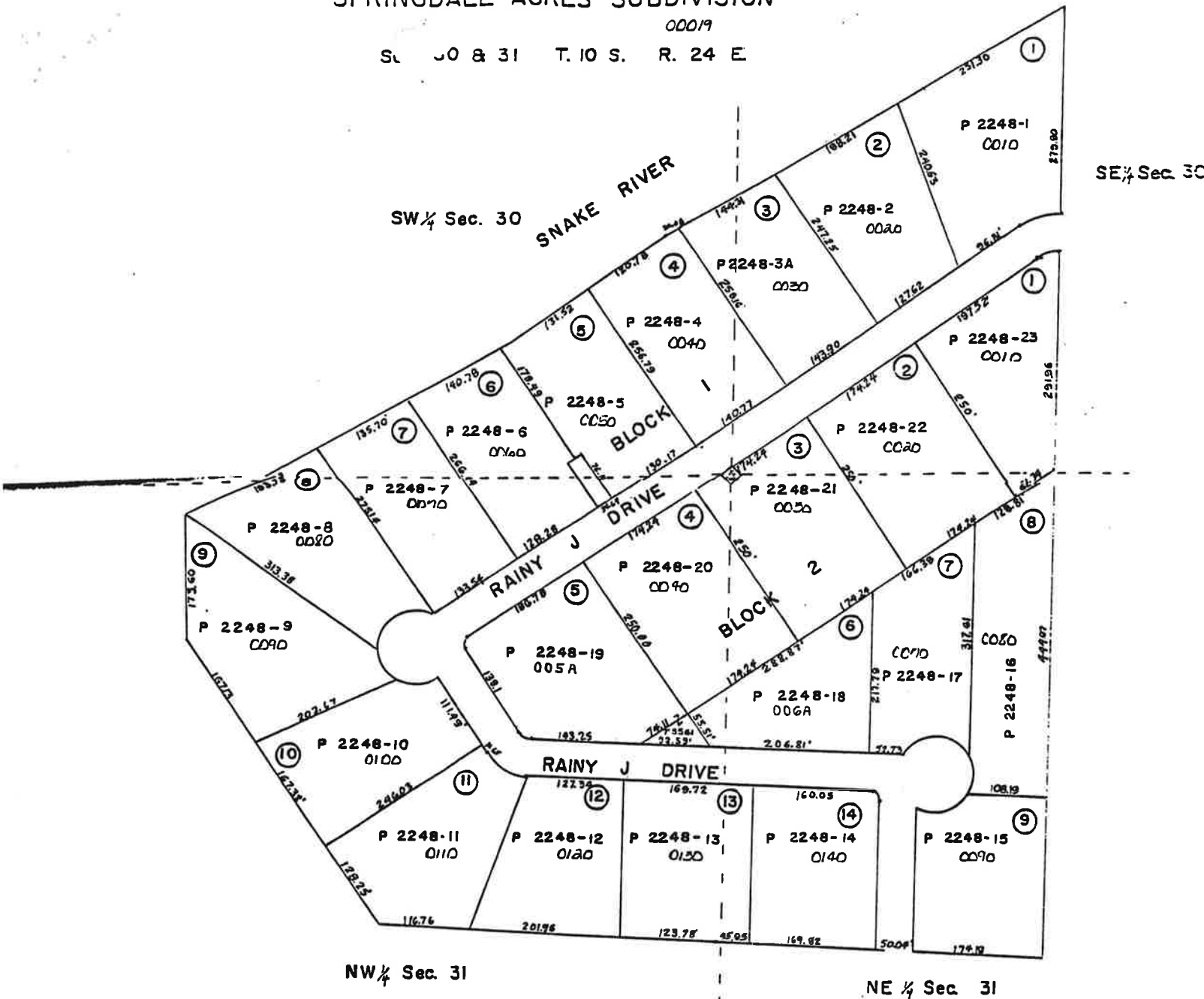


12/4/2002

SPRINGDALE ACRES SUBDIVISION

00019

S. 30 & 31 T. 10 S. R. 24 E



F19

SCALE 1 in. = 100 ft

RECEIVED

JAN 29 2003

Department of Water Resources
Southern Region

LIMITED POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENT:

I, Springdale Home Owners Association, hereby nominate and appoint Jeffrey S. Rau - Brockway Engineering as my attorney-in-fact with full authority to act for and on my behalf to undertake any and all acts or matters pertaining to water right transfers before the Idaho Department of Water Resources for the following water right transactions:

Permit No. 45-13513

in Cassia County, Idaho. Additionally, I hereby ratify and confirm any and all such acts on matters as contemplated herein.

My agent is hereby authorized to sign, seal and deliver, as my act in deed, those said instruments of writing that may be necessary or proper to carry into execution and effect the applications, and transfers above-mentioned. Further, I hereby declare that each and every application, transfer, agreement, receipt, or payment which shall be by my said agent given, made or done for the aforesaid purposes shall be as good, valid, and effectual as if they had been signed, sealed, and delivered by me in my own proper person; and I hereby undertake at all times to ratify whatsoever my said agent shall lawfully do or cause to be done in or concerning the said premises by virtue of these present. This Limited Power of Attorney will become void upon approval, denial or withdrawal of the above referenced applications.

Dated this 27th day of January 2003.

Signature

Signature

State of Idaho)

) ss.

County of CASSIA)

On this 27th Day of JANUARY, 2003 before me, a Notary Public in and for said County and State, personally appeared RICHARD K. SMITH, known or identified to me to be the individual whose name and subscription to the within instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

S
E
A
L

JEAN L. WISE
NOTARY PUBLIC
STATE OF IDAHO

Notary Public

In and for said State and County

06-11-07
My Commission Expires



STATE OF IDAH
PETE T. CENARRUSA
SECRETARY OF STATE
700 WEST JEFFERSON
PO BOX 83720
BOISE, ID 83720-0080

**PRESORTED
FIRST-CLASS
U.S. POSTAGE PAID
Bolsa, ID
PERMIT No. 1**

IDAHO ANNUAL REPORT FORM

C 83722

RETURN SERVICE REQUESTED

THIS IS THE ONLY NOTICE YOU WILL RECEIVE

sent.
2-19-02

SPRINGDALE ACRES HOMEOWNERS ASSOCIATION, INC.
ROSS V. JONES
ROUTE #1
SPRINGDALE ACRES
BURLEY, ID 83318

◆ ◆ ◆ ◆ ◆

11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847

| No. C 83722
Return to:
SECRETARY OF STATE
700 WEST JEFFERSON
PO BOX 83720
BOISE, ID 83720-0080 | Due no later than Apr 30, 2002
Annual Report Form
1. Making a change or correction to this report is to be made:
SPRINGDALE ACRES HOMEOWNERS ASSOCIA
~~ROSS V. JONES~~ Randy Stone
~~ROUTE #4~~ PO Box 910
~~SPRINGDALE ACRES~~
BURLEY, ID 83318 | 2. Registered Agent and Office NO PO BOX
~~ROSS V. JONES~~ Randy Stone
~~ROUTE #4~~ 137 W 13th Street
~~SPRINGDALE ACRES~~
BURLEY, ID 83318
3. New Registered Agent Signature
 | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|-------------|-------|------------------------|------|-------|-----|-----------|---------------|---------------------|--------|----|-------|-----------|------------------|---------------------|--------|----|-------|-----------|-----------------|---------------------|--------|----|-------|
| 4. Corporations: Enter Names and Business Addresses of President, Secretary and Directors. <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 15%;">Office held</th> <th style="width: 25%;">Name</th> <th style="width: 35%;">Street or P.O. Address</th> <th style="width: 15%;">City</th> <th style="width: 10%;">State</th> <th style="width: 10%;">Zip</th> </tr> </thead> <tbody> <tr> <td>President</td> <td>Jerry Vegwert</td> <td>492 Riverside Drive</td> <td>Burley</td> <td>ID</td> <td>83318</td> </tr> <tr> <td>Secretary</td> <td>Richard K. Smith</td> <td>500 Riverside Drive</td> <td>Burley</td> <td>ID</td> <td>83318</td> </tr> <tr> <td>Directors</td> <td>Jack Zarybnisky</td> <td>504 Riverside Drive</td> <td>Burley</td> <td>ID</td> <td>83318</td> </tr> </tbody> </table> | | | Office held | Name | Street or P.O. Address | City | State | Zip | President | Jerry Vegwert | 492 Riverside Drive | Burley | ID | 83318 | Secretary | Richard K. Smith | 500 Riverside Drive | Burley | ID | 83318 | Directors | Jack Zarybnisky | 504 Riverside Drive | Burley | ID | 83318 |
| Office held | Name | Street or P.O. Address | City | State | Zip | | | | | | | | | | | | | | | | | | | | | |
| President | Jerry Vegwert | 492 Riverside Drive | Burley | ID | 83318 | | | | | | | | | | | | | | | | | | | | | |
| Secretary | Richard K. Smith | 500 Riverside Drive | Burley | ID | 83318 | | | | | | | | | | | | | | | | | | | | | |
| Directors | Jack Zarybnisky | 504 Riverside Drive | Burley | ID | 83318 | | | | | | | | | | | | | | | | | | | | | |
| 5. Organized Under the Laws of:

IDAHO
C 83722 | 6. 
Signature _____ Date <u>3/19/02</u>
Name (Typed or Printed) <u>RICHARD K. SMITH</u>
Title <u>SECRETARY</u> | | | | | | | | | | | | | | | | | | | | | | | | | |

Issued 02/04/2002

Do Not Tape or Staple

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Fold, seal and mail this portion.

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RECEIVED

JAN 29 2003

Department of Water Resources
Southern Region

45-13513

**Springdale Acres HOA
Calculation Analysis**

| | | |
|--|-------|-----------------|
| Total # of homes on domestic system | 16 | connections |
| Non-Irrigation Season - Average domestic use per residence | 300 | gpd |
| Estimated system average daily domestic use (in house) | 4,800 | gallons per day |

Test Period #1 January 1, 2002 to April 11, 2002

| | | |
|--|--------------|---------|
| # of days in test period | 101 | days |
| Predicted domestic use based on average daily demand | 484,800 | gallons |
| Actual metered volume 1/1/02 to 4/11/02 | 5,334,400 | gallons |
| Actual volume vs. Predicted Volume | 1100% | |

Test Period #2 January 1, 2000 to April 30, 2000

| | | |
|--|-------------|---------|
| # of days in test period | 120 | days |
| Predicted domestic use based on average daily demand | 576,000 | gallons |
| Actual metered volume 1/1/02 to 4/11/02 | 5,251,800 | gallons |
| Actual volume vs. Predicted Volume | 912% | |

Check Average Heat Pump Usage

| | | |
|---|--------------|---|
| Number of homes on heat pump systems | 8 | homes |
| Test Period #1 - Estimated heat pump volume | 4,849,600 | gallons (metered - domestic in house use) |
| Average heat pump flow rate | 10 | gallons per minute |
| Estimated hours of heat pump operation | 8,083 | hours (test period volume/ heat pump rate/ 60) |
| Average operation of individual heat pumps | 10.00 | hours (hours of operation/ # homes/ days in test period) |

Note: The "overage" in 2002 can be rationalized by showing that the average run time of a heat pump system during this period is approximately 10.00 hours which is reasonable for this time period.

**Springdale Acres HOA
Water Permit Calculation**

| | | |
|----------------------------------|--------------|-----------------------|
| Maximum # of homes on heat pumps | 11 | systems |
| Current # of homes on heat pumps | 8 | systems |
| 2000 Reporting Year water use | 96.10 | acre-feet (see table) |

Estimated Domestic In-house Use

| | | |
|---|-------------|---|
| # homes with domestic service connections | 15 | homes |
| Average daily domestic use | 300 | gallons per day |
| Estimated Annual Domestic Use | 1,642,500 | gallons (# connections * daily use * 365) |
| Estimated Annual Domestic Use | 5.04 | acre feet |

Estimated Irrigation Use

| | | |
|--|--------------|-------------------------------|
| Total Irrigated Area | 9.85 | acres (See Excel Spreadsheet) |
| Allen & Brockway Irrigation Requirement - Turf | 2.79 | feet |
| Total Irrigation Requirement | 27.48 | acre feet |
| Irrigation Efficiency | 65% | |
| Total Applied to Meet IR | 42.28 | acre feet |

Estimated Maximum Heat Pump Use

| | | |
|--|-------------|---|
| 2000 Estimated Heat Pump Use | 48.78 | acre-feet (2000 reporting volume - domestic - irrigation) |
| Average Use per Home | 6.10 | acre-feet (heat pump use / 8 homes) |
| Predicted volume @ full build-out (11 systems) | 67 | acre feet |
| Maximum Flow Rate Per Heat Pump System | 12 | gallons per minute |
| Maximum Predicted Flow Rate at Full Build Out | 132 | gallons per minute |
| Maximum Predicted Flow Rate at Full Build Out | 0.29 | cfs |

Note: Based on the above calculation, the permit requests diversion rate of 0.29 cfs and a diversion volume of 67 acre-feet.

45-13513

Springdale Acres HOA
Estimated Irrigated Area

| | Area from Scanned
Plat Map
(sq ft) | Area
(acres) | Estimated
% Irrigated
(acres) | Estimated
Irrigated Area
(acres) |
|--|--|-----------------|-------------------------------------|--|
| Block #1 | | | | |
| Lot # 1 | 46,404 | 1.07 | 0 | 0.00 |
| Lot # 2 | 37,425 | 0.86 | 50 | 0.43 |
| Lot # 3 | 35,306 | 0.81 | 70 | 0.57 |
| Lot # 4 | 35,584 | 0.82 | 50 | 0.41 |
| Lot # 5 | 33,642 | 0.77 | 60 | 0.46 |
| Lot # 6 | 33,819 | 0.78 | 50 | 0.39 |
| Lot # 7 | 34,820 | 0.80 | 50 | 0.40 |
| Lot # 8 | 36,276 | 0.83 | 50 | 0.42 |
| Lot # 9 | 41,473 | 0.95 | 0 | 0.00 |
| Lot # 10 | 35,099 | 0.81 | 50 | 0.40 |
| Lot # 11 | 37,118 | 0.85 | 0 | 0.00 |
| Lot # 12 | 33,439 | 0.77 | 70 | 0.54 |
| Lot # 13 | 34,943 | 0.80 | 70 | 0.56 |
| Lot # 14 | 34,793 | 0.80 | 70 | 0.56 |
| Block #2 | | | | |
| Lot # 1 | 35,233 | 0.81 | 0 | 0.00 |
| Lot # 2 | 43,560 | 1.00 | 80 | 0.80 |
| Lot # 3 | 43,560 | 1.00 | 70 | 0.70 |
| Lot # 4 | 43,560 | 1.00 | 70 | 0.70 |
| Lot # 5 | 43,531 | 1.00 | 80 | 0.80 |
| Lot # 6 | 30,000 | 0.69 | 100 | 0.69 |
| Lot # 7 | 33,974 | 0.78 | 70 | 0.55 |
| Lot # 8 | 40,438 | 0.93 | 0 | 0.00 |
| Lot # 9 | 34,735 | 0.80 | 60 | 0.48 |
| Total Estimated Irrigated Area = | | | | 9.85 acres |
| Total IR from Allen & Brockway Report (Burley) = | | | | 851 mm |
| IR = | | | | 2.79 ft |
| Total Required for Irrigation = | | | | 27.49 ac ft |