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APR 08 2014

WATER RESOURCES
WESTERN REGION

AMENDED

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

Ident. No. 63-338691. Name of applicant(s) ParkCrest Homes (Bryan Pecht) Phone (208) 869-2973Name connector (check one): ☐ and ☐ or ☐ and/orMailing address: 10090 W. Floating Feather Road City StarState ID Zip 83669 Email: parkcrest@q.com2. Source of water supply Groundwater which is a tributary of Boise River

3. Location of point(s) of diversion:

Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Local name or tag #
4N	1W	7		NW	NE		Ada	Groundwater	

4. Water will be used for the following purposes:

Amount 47.2 acre-feet for Aesthetic Storage purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)5. Total quantity to be appropriated is (a) _____ cubic feet per second (cfs) and/or (b) 47.2 acre-feet per year (af).

6. Proposed diverting works:

a. Describe type and size of devices used to divert water from the source. Pond excavation will intersect the groundwater zone; groundwater will naturally infiltrate into the pond. Pond to be used as an amenity. Pond surface area is 3.65 acres.b. Height of storage dam N/A feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11.For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☐ No

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☐ Noe. If well is already drilled, when? _____; drilling firm _____;
Well was drilled for (well owner) _____; Drilling Permit No. _____.

7. Description of proposed uses (if irrigation only, go to item 8):

a. Hydropower; show total feet of head and proposed capacity in kW. _____

b. Stockwatering; list number and kind of livestock. _____

c. Municipal; show name of municipality or the applicant's qualifications as a municipal provider. _____

d. Domestic; show number of households _____

e. Other; describe fully. 3.65 acre pond to be used as a water amenity in a residential subdivision. Water right is intended to offset groundwater that evaporates into the atmosphere and storage volume of the pond. Avg depth=10.31' Max=15.40'

8. 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	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	1W	7		J															

Total number of acres to be irrigated: N/A

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping? N/A
10. a. Who owns the property at the point of diversion? ParkCrest Homes, LLC
- b. Who owns the land to be irrigated or place of use? ParkCrest Homes, LLC
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: _____
11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. 3.65 acre pond amenity is proposed for The Lakes at Pristine Meadows Subdivision located in Star, ID
The site is located south of W. Floating Feather Road and west of N. Star Road in the NW 1/4 of the NE 1/4 of Section 7,
Township 4N, Range 1W of the Boise Meridian in Ada County. Because the site is located west of Star Road, a water
right application can be filed for groundwater rights w/o mitigation. The water right being applied for is for the evaporation
loss of water from the pond into the atmosphere as well as the pond storage volume.
Evaporation rates were calculated using data from ETIdaho2012 found at http://data.kimberly.uidaho.edu/ETIdaho/
12. Time required for completion of works and application of water to proposed beneficial use is 1 years (minimum 1 year).
13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Bryan Pecht
 Signature of Applicant
Bryan Pecht
 Print Name (and title, if applicable)

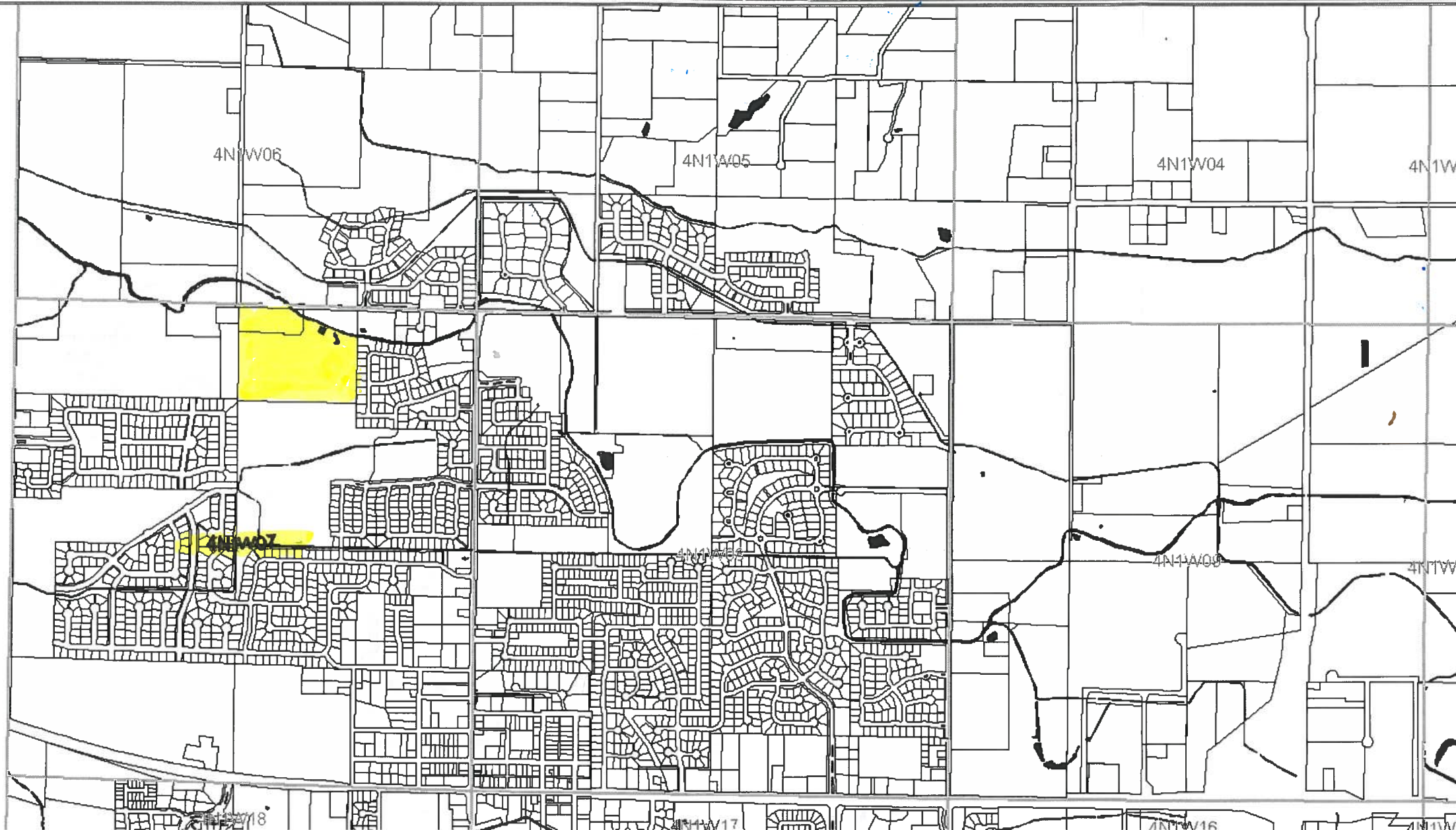
 Signature of Applicant

 Print Name (and title, if applicable)

For Department Use:

Received by kw Date 4-8-2014 Time 10:30 Preliminary check by JA
 Fee \$ 150.00 Received by JA Receipt No. W041908 Date 3/12/14
 * Fee \$ 100.00 Receipt No. W041612 Date 10/29/13

* no check enclosed - with this amended app. fee(s) submitted with
earlier/previous application versions.



ORTIDAHO
RATIONAL TECHNOLOGY
Subdivisions Parcels

Survey
Build Buffer
300
Create Clear

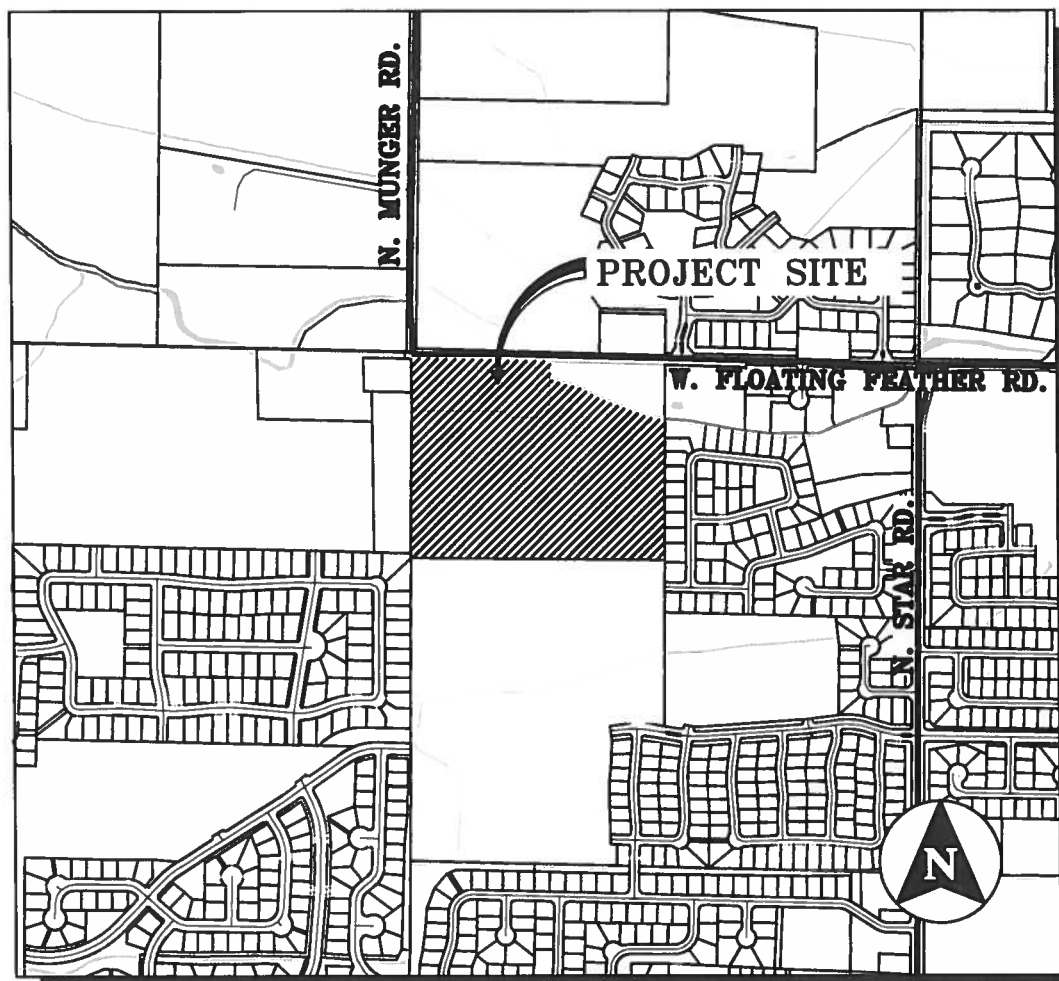
Reports
Detail Mailing

Parcel Search
Owner Last Name
Address
Parcel Number
Search Clear

Parcel Labeler
OFF

Parcel Label Setup

Redline Text
Redline Text



VICINITY MAP

SCALE: NTS



T-O ENGINEERS

332 N. BROADMORE WAY
NAMPA, IDAHO 83687-5123

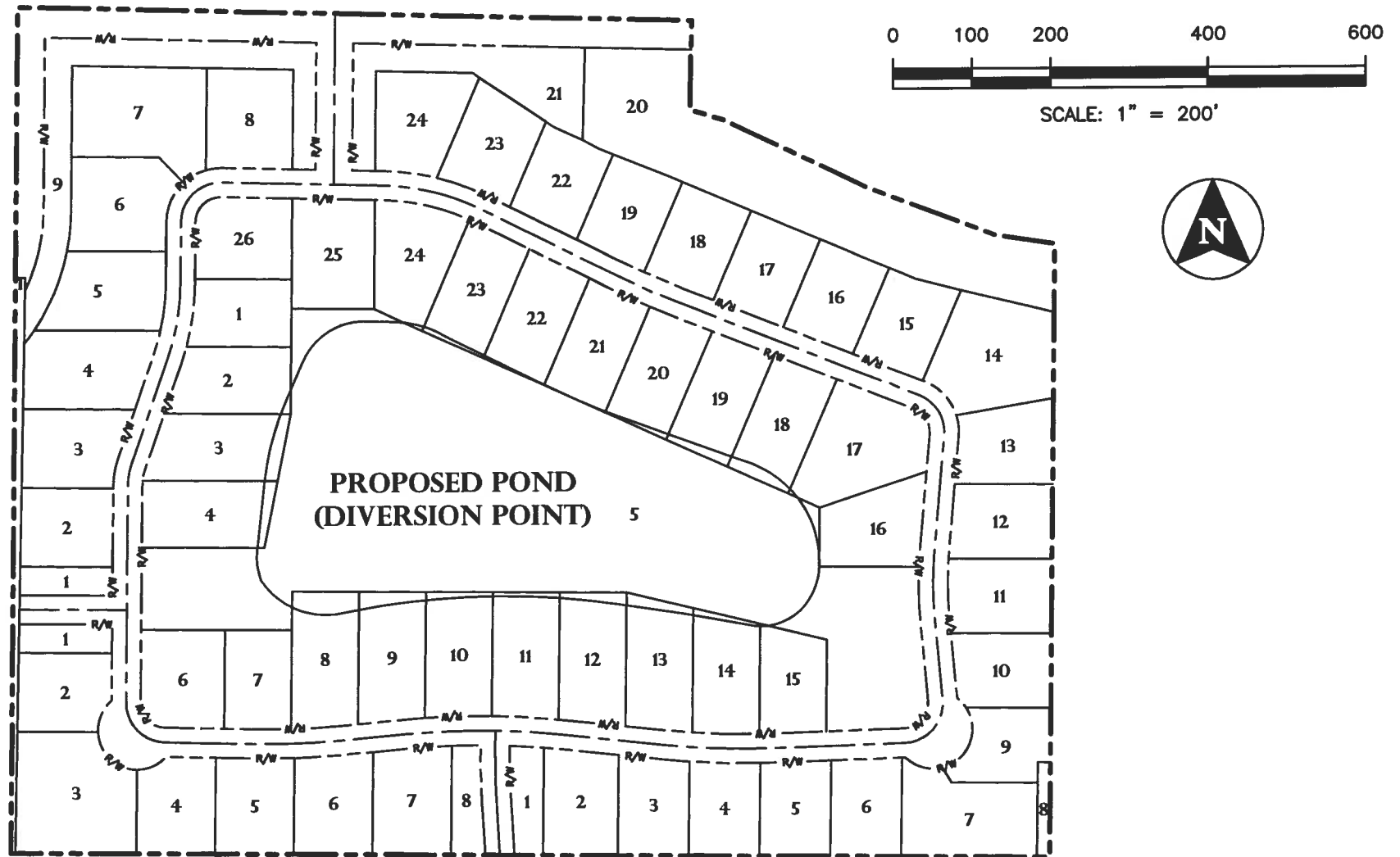
PHONE: (208) 442-6300

FAX: (208) 466-0944

E-FILE: 130052-C-PP.DWG

DATE: 10-25-13

JOB: 130052



THE LAKES AT PRISTINE MEADOWS SUBDIVISION

A PORTION OF THE NW 1/4 OF THE NE 1/4 OF SECTION 7
TOWNSHIP 4 NORTH, RANGE 1 WEST, BOISE MERIDIAN
ADA COUNTY, IDAHO
2013



T-O ENGINEERS

332 N. BROADMORE WAY
NAMPA, IDAHO 83687-5123

PHONE: (208) 442-6300

FAX: (208) 466-0944

E-FILE: 130052-C-PP-BM.DWG

DATE: 10-25-13

JOB: 130052



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**WATER RESOURCES
WESTERN REGION**

EVAPORATION CALCS FOR THE LAKES AT PRISTINE MEADOWS

Data for Open water - shallow systems (ponds, streams)*

	mm/day (average)	ft/s	pond size (ac)	Ft^3/day (average)	Annual Evaporation (acre-feet/year)
Precipitation Deficit	2.18	8.27805E-08	3.65	1137.16181	9.5

	Average Depth (feet)	Surface Area (acres)			Pond Storage Volume (acre-feet)
Pond Volume	10.31	3.65			37.6
				Total:	47.2

Notes:

*Data taken from ETIdaho 2012 Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho (Caldwell (NWS - 101380) Precipitation Deficit Data)

*Website: data.kimberly.uidaho.edu/ETIdaho/

*1 mm/day = 0.00165 cfs/day

MAR 12 2014

WATER RESOURCES
WESTERN REGION

ETIdaho 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2012, University of Idaho.

Caldwell (NWS -- 101380)

Statistics based on thirty year normal spans 1961 to 1996 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)														
Precipitation Deficit (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b
Mean ^j	mm/day												mm	
Monthly ^c	-0.83	0.18	1.22	2.51	3.74	4.22	5.01	4.27	3.06	1.89	-0.12	-0.78	753	0
15-Day Moving Average ^d	-0.88	-0.03	1.14	2.54	3.85	4.28	5.06	4.17	2.93	1.89	-0.07	-0.72		
7-Day Moving Average ^e	-0.86	0.10	1.19	2.51	3.78	4.22	5.06	4.25	2.98	1.89	-0.12	-0.76		
3-Day Moving Average ^f	-0.83	0.17	1.22	2.52	3.75	4.21	5.03	4.28	3.03	1.89	-0.11	-0.77		
Standard Deviation ^k	mm/day												mm	
Monthly ^c	1.13	0.81	1.37	0.92	1.15	0.78	1.01	1.22	0.87	0.93	0.79	1.24	113	0
15-Day Moving Average ^d	1.13	1.09	1.27	1.07	1.20	1.05	0.72	1.17	1.21	0.92	0.91	1.04		
7-Day Moving Average ^e	1.53	1.44	1.54	1.58	1.64	1.68	0.85	1.39	1.56	1.29	1.30	1.36		
3-Day Moving Average ^f	2.08	1.83	2.04	2.23	2.19	2.30	1.19	1.67	1.98	1.70	1.77	1.87		
20% Exceedance ^l	mm/day												mm	
Monthly ^c	-0.26	0.78	1.95	3.18	4.25	5.17	5.49	4.95	3.76	2.44	0.50	-0.19	850	0
15-Day Moving Average ^d	0.39	1.26	2.79	3.94	5.49	5.66	5.77	5.35	4.37	3.14	1.19	0.50		
7-Day Moving Average ^e	0.67	1.99	3.41	4.83	6.18	6.28	6.14	5.82	4.88	3.76	1.68	0.72		

3-Day Moving Average ^f	0.86	2.37	4.18	5.46	6.72	6.90	6.49	6.07	5.22	3.97	2.01	0.99			
80% Exceedance^m	mm/day												mm		
Monthly ^c	-1.36	-0.53	0.47	1.56	3.01	3.54	4.55	3.71	2.41	1.34	-0.83	-1.43	652	0	652
15-Day Moving Average ^d	-2.47	-1.53	-0.71	0.72	2.09	2.26	3.72	2.51	1.29	0.56	-1.75	-2.42			
7-Day Moving Average ^e	-4.65	-3.10	-2.43	-1.68	0.22	-0.06	3.08	0.81	-0.60	-1.11	-3.13	-3.96			
3-Day Moving Average ^f	-8.21	-5.59	-4.85	-4.91	-3.10	-3.71	1.29	-1.11	-3.98	-4.17	-5.71	-7.94			
Ave Highest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.21	0.77	2.07	3.41	4.71	5.19	5.40	4.79	3.74	2.61	0.65	0.22			
7-Day Moving Average ^h	0.48	1.50	2.77	4.30	5.44	5.91	5.77	5.35	4.41	3.27	1.18	0.47			
3-Day Moving Average ⁱ	0.70	1.91	3.48	5.04	6.23	6.57	6.19	5.70	4.90	3.64	1.65	0.74			
Ave Lowest P_{def}	mm/day												--		
15-Day Moving Average ^g	-1.64	-0.50	0.41	1.66	2.86	3.32	4.52	3.59	2.21	1.17	-0.78	-1.52			
7-Day Moving Average ^h	-3.07	-1.61	-0.67	0.32	1.34	1.62	3.92	2.68	1.11	0.13	-1.90	-2.59			
3-Day Moving Average ⁱ	-5.54	-3.31	-2.66	-2.09	-1.05	-0.86	2.46	1.22	-0.66	-1.60	-3.80	-4.95			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	-0.34	-0.50	-0.28	0.01	-0.26	-0.09	-0.67	-0.38	-0.87	0.15	0.28	-0.20	-0.41	0.00	-0.41
Kurtosis ^o	1.02	3.18	0.90	3.14	0.93	2.06	2.13	1.06	3.20	0.66	2.35	0.83	2.77	0.00	2.77

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the of green up in the spring. It is not applicable for entries without a growing season.

^c Mean of the average daily value for month

^d Mean of the fourteen 15-day period averages contained in the month

^e Mean of the twenty three 7-day period averages contained in the month

^f Mean of the twenty seven 3-day period averages contained in the month

^g Mean of the highest/lowest 15-day period average in month

^h Mean of the highest/lowest 7-day period average in month

ⁱ Mean of the highest/lowest 3-day period average in month

^j This value represents the *mean value* for the parameter for the month over the 'normal' period of record. Generally, the 'normal' period is the last thirty years with data.

^k This value represents the *standard deviation* for the parameter for the month over the 'normal' period.

^l This value represents the *value* for the parameter that has a 20% chance of being exceeded that month during any particular year. Conversely, there is an 80% chance that the parameter value will be less than the *value* shown.

^m This value represents the *value* for the parameter that has a 80% chance of being exceeded that month during any particular year. Conversely, there is an 20% chance that the parameter value will be less than the *value* shown.

ⁿ This value represents the *skewness (asymmetry) of the distribution of the parameter values* for the month (year) over the 'normal' period. A value near zero indicates that the distribution approximates a normal (Gaussian) and symmetrical distribution. A negative skew indicates that the parameter distribution has relatively few low values compared to high values. A positive skew indicates that the distribution has relatively few high values compared to the number of low values. A skew value near 1 indicates that the underlying distribution approximates a lognormal distribution.

^o This value represents the *kurtosis* of the parameter value distribution for the month (year) over the 'normal' period. Kurtosis is a measurement of the height to width ratio of the probability distribution, or the *peakedness (slenderness)*. A normal (Gaussian) distribution has a kurtosis of 3. A high kurtosis distribution has a sharper peak and longer tails, while a low kurtosis distribution has a more rounded peak and shorter tails.

This work and report were prepared by the University of Idaho Research and Extension Center at Kimberly, Idaho under contract with the Idaho Department of Water Resources. Work was supported by funding from IDWR and the Idaho Agricultural Experiment Station and Idaho Engineering Experiment Station. The authors gratefully acknowledge the long-term evapotranspiration data collection and long-standing advice provided by Dr. James L. Wright, USDA-ARS Kimberly (ret.), the more than two decades of high quality agricultural weather data collection by the U.S. Bureau of Reclamation AgriMet system, and the very long-standing, routine data collection by the hundreds of cooperative weather station volunteers across the state who, for more than one-hundred years, have faithfully observed daily air temperature and precipitation.

The citation for the evapotranspiration data used from this site should be: *Allen, Richard G. and Clarence W. Robison, 2012. Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.*

Questions regarding the data should be addressed to [Clarence W. Robison](#) or [Richard G. Allen](#), University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

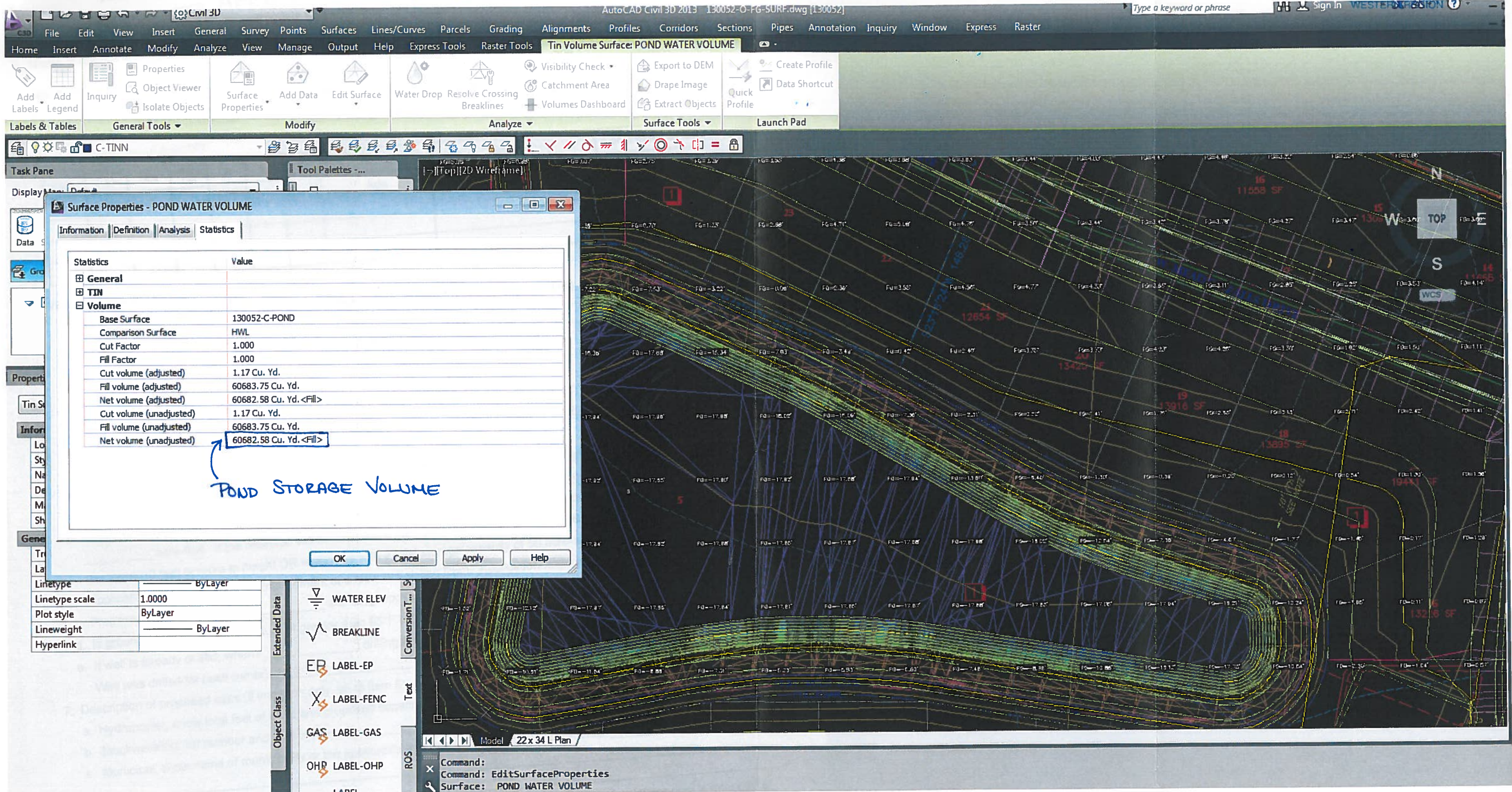


ETIdaho web site powered by [Debian](#), [Apache](#), [Firebird DBMS](#), [Python](#), with [matplotlib](#), and [kinterbasdb](#).

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APR 16 2014

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STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

Ident. No. 63-33869

WATER RESOURCES

1. Name of applicant(s) ParkCrest Homes (Bryan Pecht) Phone (208) 869-2973Name connector (check one): ☐ and ☐ or ☐ and/orMailing address: 10090 W. Floating Feather Road City StarState ID _____ Zip 83669 Email: parkcrest@q.com2. Source of water supply Groundwater which is a tributary of Boise River

3. Location of point(s) of diversion:

Twp	Rge	Sec	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
4N	1W	7		NW	NE		Ada	Groundwater	

4. Water will be used for the following purposes:

Amount 9.5 acre-feet for pond evaporation purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per year)Amount 37.6 acre-feet for pond storage purposes from Jan 1 to Dec 31 (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)5. Total quantity to be appropriated is (a) _____ cubic feet per second (cfs) and/or (b) 47.2 acre-feet per year (af).

6. Proposed diverting works:

a. Describe type and size of devices used to divert water from the source. Pond excavation will intersect the groundwater zone; groundwater will natural infiltrate into the pond. Pond to be used as an amenity. Pond surface area is 3.65 acres.b. Height of storage dam N/A feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11.For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☐ No

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☐ Noe. If well is already drilled, when? _____; drilling firm _____;
Well was drilled for (well owner) _____; Drilling Permit No. _____.

7. Description of proposed uses (if irrigation only, go to item 8):

a. Hydropower; show total feet of head and proposed capacity in kW. _____

b. Stockwatering; list number and kind of livestock. _____

c. Municipal; show name of municipality or the applicant's qualifications as a municipal provider. _____

d. Domestic; show number of households _____

e. Other; describe fully. 3.65 acre pond to be used as a water amenity in a residential subdivision. Water right is intended to offset groundwater that evaporates into the atmosphere and storage volume of the pond. Avg depth=10.31' Max=15.40'

SUPERSEDED BY AMENDED APP RECEIVED 4/8/14.

8. 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	RGE	SEC	NE				NW				SW				SE				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	1W	7		J															

Total number of acres to be irrigated: N/A

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping? N/A

10. a. Who owns the property at the point of diversion? ParkCrest Homes, LLC
- b. Who owns the land to be irrigated or place of use? ParkCrest Homes, LLC
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: Affidavit of Legal Interest

11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. 3.65 acre pond amenity is proposed for The Lakes at Pristine Meadows Subdivision located in Star, ID. The site is located south of W. Floating Feather Road and west of N. Star Road in the NW 1/4 of the NE 1/4 of Section 7, Township 4N, Range 1W of the Boise Meridian in Ada County. Because the site is located west of Star Road, a water right application can be filed for groundwater rights w/o mitigation. The water right being applied for is for the evaporation loss of water from the pond into the atmosphere as well as the pond storage volume.

Evaporation rates were calculated using data from ETIdaho2012 found at <http://data.kimberly.uidaho.edu/ETIdaho/>

12. Time required for completion of works and application of water to proposed beneficial use is 1 years (minimum 1 year).
13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Corinne M Haase

Signature of Applicant

Corinne Haase, E.I. (Staff Engineer T-O Engineers)

Print Name (and title, if applicable)

Signature of Applicant

Print Name (and title, if applicable)

For Department Use:

Received by AR Date 3/12/14 Time - Preliminary check by AR

* Fee \$ 150.00 Received by CN Receipt No. W041908 Date 3/12/14

* PLUS ORIGINAL APP FEE RECEIVED 10/29/13 W041612 \$100.00 : \$250.00 TOTAL PAID.

SUPERSEDED BY AMENDED APP RECEIVED 4/8/14

RECEIVED

OCT 29 2013

ORIGINAL

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCESIdent. No. 63-33869

APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant(s) ParkCrest Homes (Bryan Pecht) Phone (208) 869-2973
 Name connector (check one): ☐ and ☐ or ☐ and/or

Mailing address: 10090 W. Floating Feather Road City StarState ID Zip 83669 Email: parkcrest@q.com2. Source of water supply Groundwater which is a tributary of Boise River

3. Location of point(s) of diversion:

Twp	Rge	Sec	Govt Lot	1/4	1/4	1/4	County	Source	Local name or tag #
4N	1W	7		NE	NW		Ada	Groundwater	

4. Water will be used for the following purposes:

Amount 0.031 cfs for pond evaporation purposes from Apr 1 to Sept 30 (both dates inclusive)
(cfs or acre-feet per year)Amount 0.0081 cfs for pond evaporation purposes from Oct 1 to Mar 30 (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)Amount _____ for _____ purposes from _____ to _____ (both dates inclusive)
(cfs or acre-feet per year)5. Total quantity to be appropriated is (a) _____ cubic feet per second (cfs) and/or (b) 14.03 acre-feet per year (af).

6. Proposed diverting works:

a. Describe type and size of devices used to divert water from the source. Pond excavation will intersect the groundwater zone and groundwater will natural infiltrate into the pond. Pond to be used as an amenity. Approx. pond size is 5 acres.b. Height of storage dam N/A feet; active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet. If the reservoir will be filled more than once each year, describe the refill plan in item 11.For dams 10 feet or more in height OR reservoirs with a total storage capacity of 50 acre-feet or more, submit a separate Application for Construction or Enlargement of a New or Existing Dam. Application required? ☐ Yes ☐ No

c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

d. Is ground water with a temperature of greater than 85°F being sought? ☐ Yes ☐ No

e. If well is already drilled, when? _____; drilling firm _____;

Well was drilled for (well owner) _____; Drilling Permit No. _____

7. Description of proposed uses (if irrigation only, go to item 8):

a. Hydropower; show total feet of head and proposed capacity in kW. _____

b. Stockwatering; list number and kind of livestock. _____

c. Municipal; show name of municipality or the applicant's qualifications as a municipal provider. _____

d. Domestic; show number of households _____

e. Other; describe fully. Approximate 5 acre pond to be used as a water amenity in a residential subdivision. Water right is intended to offset groundwater that evaporates into the atmosphere.

SUPERSEDED BY AMENDED APP RECEIVED 3/12/14 & 4/8/14.

8. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
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			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	1W	7		J															

Total number of acres to be irrigated: N/A

9. Describe any other water rights used for the same purposes as described above. Include water delivered by a municipality, canal company, or irrigation district. If this application is for domestic purposes, do you intend to use this water, water from another source, or both, to irrigate your lawn, garden, and/or landscaping? N/A

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- b. Who owns the land to be irrigated or place of use? ParkCrest Homes, LLC
- c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing: Affidavit of Legal Interest
11. Describe your proposal in narrative form, and provide additional explanation for any of the items above. Attach additional pages if necessary. A 5 acre pond amenity is proposed for The Lakes at Pristine Meadows Subdivision located in Star, ID. The site is located south of W. Floating Feather Road and west of N. Star Road in the NW 1/4 of the NE 1/4 of Section 7, Township 4N, Range 1W of the Boise Meridian in Ada County. Because the site is located west of Star Road, a water right application can be filed for groundwater rights. The water right being applied for is for the evaporation loss of water from the pond into the atmosphere. Evaporation rates were calculated using data from ETIdaho2012 found at <http://data.kimberly.uidaho.edu/ETIdaho/>
12. Time required for completion of works and application of water to proposed beneficial use is 1 years (minimum 1 year).
13. **MAP OF PROPOSED PROJECT REQUIRED** - Attach an 8½" x 11" map clearly identifying the proposed point of diversion, place of use, section #, township & range. A photocopy of a USGS 7.5 minute topographic quadrangle map is preferred.

The information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval.

Bryan Pecht
Signature of Applicant
Bryan Pecht Member
Print Name (and title, if applicable)

Signature of Applicant

Print Name (and title, if applicable)

For Department Use:

Received by JA Date 10/29/13 Time 10:50 Preliminary check by AN
Fee \$ 100.00 Received by JA Receipt No. W041612 Date 10/29/13

SUPERSEDED BY AMENDED APP RECEIVED 3/12/14 & 4/8/14.



T.O ENGINEERS

EVAPORATION CALCS FOR THE LAKES AT PRISTINE MEADOWS

Data for Open water - shallow systems (ponds, streams)*

	mm/day (average)	ft/s	pond size (ac)	Ft^3/day (average)	6 month Evaporation (acre-feet/year)
Mean Actual Evapotranspiration (Apr- Sept)	3.77	1.43157E-07	5	2693.91732	11.1318898
Mean Actual Evapotranspiration (Oct- Apr)	0.98	3.72132E-08	5	700.27559	2.8937008
				Total:	14.0255906

Notes:

*Data taken from ETIdaho 2012 Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

*Website: data.kimberly.uidaho.edu/ETIdaho/

*1 mm/day = 0.00165 cfs/day

Prepared By: Corinne Haase
Date: 10-24-2013

SUPERSEDED BY AMENDED APP RECEIVED 3/12/14 4/8/14

ET_{Idaho} 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2012, University of Idaho.

Boise 7 N (NWS -- 101017)

Statistics based on thirty year normal spans 1980 to 2010 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)															
Actual Evapotranspiration (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean ^j	mm/day												mm		
Monthly ^c	0.38	0.83	1.67	2.77	3.62	4.37	4.75	4.09	3.04	1.92	0.73	0.36	871	0	871
15-Day Moving Average ^d	0.37	0.80	1.68	2.80	3.65	4.40	4.78	4.08	2.99	1.94	0.71	0.35			
7-Day Moving Average ^e	0.38	0.81	1.67	2.77	3.63	4.39	4.77	4.10	3.01	1.93	0.71	0.35			
3-Day Moving Average ^f	0.38	0.82	1.66	2.77	3.62	4.38	4.75	4.10	3.03	1.93	0.73	0.36			
Standard Deviation ^k	mm/day												mm		
Monthly ^c	0.09	0.11	0.34	0.35	0.60	0.40	0.42	0.39	0.24	0.28	0.14	0.09	43	0	43
15-Day Moving Average ^d	0.09	0.16	0.31	0.44	0.59	0.54	0.34	0.37	0.38	0.31	0.19	0.08			
7-Day Moving Average ^e	0.14	0.25	0.41	0.61	0.80	0.74	0.44	0.50	0.51	0.45	0.23	0.13			
3-Day Moving Average ^f	0.20	0.33	0.54	0.81	1.01	0.96	0.65	0.67	0.69	0.58	0.31	0.19			
20% Exceedance ^l	mm/day												mm		
Monthly ^c	0.42	0.94	1.90	3.10	3.93	4.69	5.00	4.31	3.19	2.05	0.86	0.41	898	0	898
15-Day Moving Average ^d	0.50	1.10	2.20	3.46	4.61	5.29	5.24	4.58	3.54	2.40	1.00	0.47			

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7-Day Moving Average ^e	0.67	1.38	2.55	4.10	5.21	5.73	5.60	5.03	3.95	2.85	1.22	0.63			
3-Day Moving Average ^f	0.88	1.68	3.13	4.65	5.83	6.27	5.99	5.38	4.44	3.17	1.52	0.81			
80% Exceedance^m	mm/day												mm		
Monthly ^c	0.33	0.73	1.42	2.43	3.25	3.93	4.53	3.89	2.87	1.78	0.61	0.28	833	0	833
15-Day Moving Average ^d	0.23	0.58	1.23	2.03	2.60	3.44	4.16	3.49	2.43	1.39	0.43	0.21			
7-Day Moving Average ^e	0.12	0.37	1.00	1.71	2.21	2.88	3.94	3.14	2.08	1.04	0.34	0.09			
3-Day Moving Average ^f	-0.01	0.23	0.76	1.34	1.73	2.44	3.21	2.45	1.58	0.74	0.20	-0.01			
Ave Highest ET_{act}	mm/day												--		
15-Day Moving Average ^g	0.47	0.98	1.96	3.18	4.15	4.90	5.02	4.43	3.37	2.25	0.88	0.43			
7-Day Moving Average ^h	0.59	1.21	2.25	3.64	4.69	5.33	5.33	4.77	3.76	2.58	1.04	0.54			
3-Day Moving Average ⁱ	0.78	1.47	2.69	4.24	5.32	5.86	5.75	5.14	4.21	2.91	1.29	0.71			
Ave Lowest ET_{act}	mm/day												--		
15-Day Moving Average ^g	0.28	0.66	1.41	2.39	3.13	3.89	4.50	3.73	2.65	1.62	0.58	0.27			
7-Day Moving Average ^h	0.18	0.50	1.17	1.99	2.63	3.37	4.18	3.44	2.35	1.36	0.44	0.17			
3-Day Moving Average ⁱ	0.06	0.33	0.89	1.64	2.07	2.79	3.49	2.89	1.86	1.03	0.27	0.04			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	0.16	0.18	0.22	1.00	0.16	0.12	-0.09	0.15	-0.79	0.26	0.07	0.08	0.79	0.00	0.79
Kurtosis ^o	1.06	2.44	0.68	3.88	0.89	2.44	0.82	0.70	4.39	0.92	2.40	0.64	3.06	0.00	3.06

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the of green up in the spring. It is not applicable for entries without a growing season.

^c Mean of the average daily value for month

^d Mean of the fourteen 15-day period averages contained in the month

^e Mean of the twenty three 7-day period averages contained in the month

^f Mean of the twenty seven 3-day period averages contained in the month

^g Mean of the highest/lowest 15-day period average in month

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^h Mean of the highest/lowest 7-day period average in month

ⁱ Mean of the highest/lowest 3-day period average in month

^j This value represents the *mean value* for the parameter for the month over the 'normal' period of record. Generally, the 'normal' period is the last thirty years with data.

^k This value represents the *standard deviation* for the parameter for the month over the 'normal' period.

^l This value represents the *value* for the parameter that has a 20% chance of being exceeded that month during any particular year. Conversely, there is an 80% chance that the parameter value will be less than the *value* shown.

^m This value represents the *value* for the parameter that has a 80% chance of being exceeded that month during any particular year. Conversely, there is an 20% chance that the parameter value will be less than the *value* shown.

ⁿ This value represents the *skewness (asymmetry) of the distribution of the parameter values* for the month (year) over the 'normal' period. A value near zero indicates that the distribution approximates a normal (Gaussian) and symmetrical distribution. A negative skew indicates that the parameter distribution has relatively few low values compared to high values. A positive skew indicates that the distribution has relatively few high values compared to the number of low values. A skew value near 1 indicates that the underlying distribution approximates a lognormal distribution.

^o This value represents the *kurtosis* of the parameter value distribution for the month (year) over the 'normal' period. Kurtosis is a measurement of the height to width ratio of the probability distribution, or the *peakedness (slenderness)*. A normal (Gaussian) distribution has a kurtosis of 3. A high kurtosis distribution has a sharper peak and longer tails, while a low kurtosis distribution has a more rounded peak and shorter tails.

This work and report were prepared by the University of Idaho Research and Extension Center at Kimberly, Idaho under contract with the Idaho Department of Water Resources. Work was supported by funding from IDWR and the Idaho Agricultural Experiment Station and Idaho Engineering Experiment Station. The authors gratefully acknowledge the long-term evapotranspiration data collection and long-standing advice provided by Dr. James L. Wright, USDA-ARS Kimberly (ret.), the more than two decades of high quality agricultural weather data collection by the U.S. Bureau of Reclamation AgriMet system, and the very long-standing, routine data collection by the hundreds of cooperative weather station volunteers across the state who, for more than one-hundred years, have faithfully observed daily air temperature and precipitation.

The citation for the evapotranspiration data used from this site should be: Allen, Richard G. and Clarence W. Robison, 2012. ***Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008***, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.

Questions regarding the data should be addressed to [Clarence W. Robison](#) or [Richard G. Allen](#), University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

SUPERSEDED BY AMENDED APP RECEIVED 3/12/14. 4/8/14.

Sommer, Rachel

From: Sommer, Rachel
Sent: Thursday, April 10, 2014 10:10 AM
To: 'waterdistrict63@qwestoffice.net'
Subject: Application for Permit
Attachments: Application 63-33869.pdf

April 10, 2014

REX BARRIE
WATER DISTRICT #63
PO BOX 767
10769 W STATE ST
STAR ID 83669-0767

RE: Application for Permit No. 63-33869

Dear Watermaster:

The Idaho Department of Water Resources (IDWR) is seeking written comment and/or recommendations from you regarding the above referenced water right application(s). I have attached the application(s) to this email for your reference. Please review the attached file(s), complete a recommendation form, and submit your reply, if any, to this office by May 5, 2014.

IDWR will assume you do not object to this application if a timely response is not received. Please contact me if you have any questions in this matter. Thank you for your help.

Sincerely,

Rachel Sommer

Administrative Assistant
Dept. of Water Resources
Western Regional Office
2735 Airport Way, Boise ID 83705
Phone 208-334-2190 | Fax 208-334-2348
Email: rachel.sommer@idwr.idaho.gov

Sommer, Rachel

From: Sommer, Rachel
Sent: Thursday, April 10, 2014 9:31 AM
To: 'LEGALS@IDAHOSTATESMAN.COM'
Subject: Ada Legal Ad
Attachments: Ada Cover Letter.docx; Ada Legal Ad.docx

Good Morning Janice Hildreth,

Please see the attached ad for publication on 4/17/2014 & 4/24/2014.

Please confirm these are okay to publish as shown.

Thank you very much,

Rachel Sommer

Administrative Assistant
IDWR, Western Region
Office: 208-334-2190
Fax: 208-334-2348
rachel.sommer@idwr.idaho.gov

April 10, 2014

LEGAL NOTICE DEPARTMENT
IDAHO STATESMAN
PO BOX 40
BOISE, ID 83707

RE: Application for Permit No. 63-33869

Dear Legal Notice Department:

Please publish the enclosed legal notice on the dates indicated (once a week for two consecutive weekly issues). If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Please send the affidavit and bill to this office before 5/5/2014. Your cooperation is appreciated.

Sincerely,

Rachel Sommer
Administrative Assistant

Enclosures

The following application has been filed to appropriate the public waters of the State of Idaho:

63-33869

PARKCREST HOMES

10090 W FLOATING FEATHER RD

STAR, ID 83669

Point of Diversion NWNE S7 T04N R01W ADA County Source GROUND WATER

Use: AESTHETIC STORAGE 01/01 to 12/31 47.2 AF

Total Diversion: 47.2 AF

Date Filed: 10/29/2013

Place of Use: AESTHETIC STORAGE

T04N R01W S7 NWNE

Water bearing zone to be appropriated is from 0 to 16 feet.

Permits will be subject to all prior water rights. For additional information concerning the property location, contact Western Region office at (208) 334-2190; or for a full description of the right(s), please see www.idwr.idaho.gov/apps/ExtSearch/WRFiling.asp. Protests may be submitted based on the criteria of Idaho Code § 42-203A. Any protest against the approval of this application must be filed with the Director, Dept. of Water Resources, Western Region, 2735 Airport Way, Boise ID 83705 together with a protest fee of \$25.00 for each application on or before 5/5/2014. The protestant must also send a copy of the protest to the applicant.

GARY SPACKMAN, Director

Published on 4/17/2014 and 4/24/2014



T-O ENGINEERS

RECEIVED

APR 08 2014

WATER RESOURCES
WESTERN REGION

April 7, 2014

Idaho Department of Water Resources
Attn: Angela Grimm, P.G.
2735 Airport Way
Boise, ID 83705

Dear Angela:

We received your amended application request for Application for Permit No. 63-33869 dated March 31, 2014. This letter accompanies our resubmittal of the application complete with the requested changes. Please find our responses to your comments below.

- **Water Uses/Quantity (item no. 4):** Volumes for pond evaporation and pond capacity have been combined with the use stated as Aesthetic Storage.
- **Signature:** An original copy signed by Bryan Pecht has been submitted with the amended application.

Please feel free to contact me at (208) 442-6300 with any additional comments or questions.

Sincerely,

Corinne M. Haase, E.I.
Staff Engineer

Enclosures



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

March 31, 2014

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

PARKCREST HOMES (BRYAN PECHT)
C/O CORINNE M HAASE
TO ENGINEERS
332 N BROADMORE WAY
NAMPA ID 83687

Re: Application for Permit No. 63-33869 – Amended Application Request

Dear Applicant:

In response to my letter dated March 5, 2014, the Idaho Department of Water Resources (IDWR) recently received your amended application seeking ground water for an excavated pond. Thank you for that submittal. The amended application addressed most of the items requested; however the application requires the following items be addressed prior to further processing:

- **Water Uses/Quantity (item no. 4):** IDWR policy is to describe your client's proposed use (water amenity pond within a subdivision) as an aesthetic storage use. Please amend the application to describe the yearly **total volume** of water (capacity and evaporative losses) for this pond as "Aesthetic Storage" use (rather than "pond evaporation" and "pond storage") in accordance with IDWR policy.
- **Signature:** The amended application was signed by you (Corinne M. Haase). IDWR policy requires the applicant (person or company member authorized to sign on behalf of an organization) or authorized representative (attorney or one holding power of attorney for the applicant). Please have the applicant (Bryan Pecht, Robert Yanzuk, or another individual authorized to sign on behalf of Parkcrest Homes) sign the amended application and return the original signature page (not a copy) to IDWR.

Please provide an amended application for application processing to continue. You may seek additional time to provide the amended application by making a written request to interrupt processing for up to six months. **Your response including the requested information, or a request for more time to seek the information, must be received within the next thirty (30) days.** The application will be voided without a timely written reply.

Please contact me at 208-334-2190 if you need more information. Thank you for your attention to these matters.

Sincerely,

Angela M. Grimm, P.G.
Water Resource Agent, Sr.

RECEIVE



MAR 12 2014

WATER RESOURCES
WESTERN REGION

T-O ENGINEERS

March 11, 2014

Idaho Department of Water Resources
Attn: Angela Grimm, P.G.
2735 Airport Way
Boise, ID 83705

Dear Angela:

We received your amended application request for Application for Permit No. 63-33869 dated March 5, 2014. This letter accompanies our resubmittal of the application complete with the requested changes. Please find our responses to your comments below.

- **Point of Diversion [(POD) item no. 3]:** Point of diversion point has been corrected in the amended application.
- **Quantity (item no. 4):** Total volume for pond evaporation has been calculated using Caldwell (NWS – 101380) Precipitation Deficit data for open water. Based on the revised surface area of 3.65 acres the total annual evaporation loss is 9.5 acre-feet per year.

The calculated pond volume is 37.6 acre-feet. The pond surface area is 3.65 acres with an average depth of 10.31' and a maximum depth of 15.40'. Supporting AutoCAD volume calculations have been included in our resubmittal.

- **Proposed diverted work (item no. 6):** Average depth and maximum depth have been listed on the amended application under item 7e.
- **Signature:** An original signed copy has been submitted with the amended application.
- **Fee:** An additional \$150 is included with our resubmittal.

Please feel free to contact me at (208) 442-6300 with any additional comments or questions.

Sincerely,

Corinne M. Haase, E.I.
Staff Engineer

Enclosures



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Web Site: www.idwr.idaho.gov

March 5, 2014

C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

PARKCREST HOMES (BRYAN PECHT)
C/O TO ENGINEERS
332 N BROADMORE WAY
NAMPA ID 83687

Re: Application for Permit No. 63-33869 – Amended Application Request

Dear Applicant:

The Idaho Department of Water Resources (IDWR) recently received your client's application seeking ground water for an excavated pond. Before processing can continue, IDWR requests you submit an amended application to address the following:

- **Point of Diversion [(POD) item no. 3]:** The application identifies the applicant's proposed POD (pond) to be in the NE NW Section 7 T4N R1W. However, according to the application map and proposed place of use (POU), the pond is to be located in the NW NE Section 7 T4N R1W. Please amend the application accordingly.
- **Quantity (item no. 4):** The applicant proposes to construct an excavated pond. The application proposes a quantity of water for the evaporative losses (consumptive use) associated with the proposed pond. Water right coverage is required for both the evaporative losses AND the capacity, i.e. the total amount of water to be stored for the entire year. Please amend the application to describe the yearly **total volume** of water (capacity and evaporative losses) for this pond as "Aesthetic Storage" use.

The applicant split the use described into two different six month time periods. The standard practice in describing storage use(s) for a pond is to describe the pond as having a year round season of use. Please amend the application accordingly.

Calculations for the evaporative losses associated with the proposed pond were based on the Boise 7 N (NWS – 101017) Station Actual Evapotranspiration data set. As a general policy, IDWR recommends using the Precipitation Deficit data set for the station closest to the diversion, in this case the Caldwell (NWS – 101380) Station (data set enclosed). The Precipitation Deficit is the total amount of free pan evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. IDWR typically uses the sum of the mean monthly values (zero is used in place of negative values, i.e. months when precipitation is greater than evapotranspiration) to calculate the evaporative losses, i.e. consumptive use, associated with an excavated pond. Water right authorization of approximately 13.1 AF (acre-feet) per year would be required for the evaporative losses associated with the five acre pond proposed, based on the calculation method described.

ParkCrest Homes (Bryan Pecht)

March 5, 2014

Page 2 of 2

The capacity of the pond is typically estimated by multiplying the proposed average depth by the surface area. Please amend the application to include the estimated capacity and the evaporative losses in one year round storage use. Please document the method used to derive the total volume proposed.

- **Proposed diverting works (item no. 6):** Please amend the application to include the proposed pond average depth and maximum depth dimensions. The average depth information is used to verify the proposed capacity. The maximum depth information is used to establish the proposed water bearing zone to be appropriated, which must be included as a legal notice remark in the publication of all ground water permit applications within the Boise River basin.
- **Signature:** Please submit the original applicant signature page (not a copy) with the amended application.
- **Fee:** The processing fee for an application proposing up to 20 AF for storage is \$100, which was submitted with the original application. Should the application be amended to increase the proposed quantity above 20 AF, please submit the additional required fee (ex. fee is \$250 for 21 – 100 AF which would require additional \$150 fee submission).

Please provide an amended application for application processing to continue. You may seek additional time to provide the amended application and information by making a written request to interrupt processing for up to six months. **Your response including the requested information, or a request for more time to seek the information, must be received within the next sixty (60) days.** The application will be voided without a timely written reply. With submittal of an amended application, please identify a specific T-O Engineers' contact person to direct any further inquires to.

Please contact me at 208-334-2190 if you need more information. Thank you for your attention to these matters.

Sincerely,



Angela M. Grimm, P.G.
Water Resource Agent, Sr.

Enclosure: Caldwell (NWS – 101380) Open water – shallow systems Precipitation Deficit data

ET *Idaho* 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2012, University of Idaho.

Caldwell (NWS -- 101380)

Statistics based on thirty year normal spans 1961 to 1996 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)															
Precipitation Deficit (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean ^j	mm/day												mm		
Monthly ^c	0.83	0.18	1.22	2.51	3.74	4.22	5.01	4.27	3.06	1.89	0.12	0.78	753	0	753
15-Day Moving Average ^d	0.88	0.03	1.14	2.54	3.85	4.28	5.06	4.17	2.93	1.89	0.07	0.72			
7-Day Moving Average ^e	0.86	0.10	1.19	2.51	3.78	4.22	5.06	4.25	2.98	1.89	0.12	0.76			
3-Day Moving Average ^f	0.83	0.17	1.22	2.52	3.75	4.21	5.03	4.28	3.03	1.89	0.11	0.77			
Standard Deviation ^k	mm/day														
Monthly ^c	1.13	0.81	1.37	0.92	1.15	0.78	1.01	1.22	0.87	0.93	0.79	1.24	113	0	113
15-Day Moving Average ^d	1.13	1.09	1.27	1.07	1.20	1.05	0.72	1.17	1.21	0.92	0.91	1.04			
7-Day Moving Average ^e	1.53	1.44	1.54	1.58	1.64	1.68	0.85	1.39	1.56	1.29	1.30	1.36			
3-Day Moving Average ^f	2.08	1.83	2.04	2.23	2.19	2.30	1.19	1.67	1.98	1.70	1.77	1.87			
20% Exceedance ^l	mm/day														
Monthly ^c	0.26	0.78	1.95	3.18	4.25	5.17	5.49	4.95	3.76	2.44	0.50	0.19	850	0	850
15-Day Moving Average ^d	0.39	1.26	2.79	3.94	5.49	5.66	5.77	5.35	4.37	3.14	1.19	0.50			
7-Day Moving Average ^e	0.67	1.99	3.41	4.83	6.18	6.28	6.14	5.82	4.88	3.76	1.68	0.72			
3-Day Moving	0.86	2.37	4.18	5.46	6.72	6.90	6.49	6.07	5.22	3.97	2.01	0.99			

Average ^f															
80% Exceedance^m	mm/day												mm		
Monthly ^c	1.36	0.53	0.47	1.56	3.01	3.54	4.55	3.71	2.41	1.34	0.83	1.43	652	0	652
15-Day Moving Average ^d	2.47	1.53	-0.71	0.72	2.09	2.26	3.72	2.51	1.29	0.56	1.75	2.42			
7-Day Moving Average ^e	4.65	3.10	-2.43	1.68	0.22	0.06	3.08	0.81	0.60	1.11	3.13	3.96			
3-Day Moving Average ^f	8.21	5.59	-4.85	4.91	-3.10	3.71	1.29	-1.11	3.98	4.17	5.71	7.94			
Ave Highest P_{def}	mm/day												--		
15-Day Moving Average ^g	0.21	0.77	2.07	3.41	4.71	5.19	5.40	4.79	3.74	2.61	0.65	0.22			
7-Day Moving Average ^h	0.48	1.50	2.77	4.30	5.44	5.91	5.77	5.35	4.41	3.27	1.18	0.47			
3-Day Moving Average ⁱ	0.70	1.91	3.48	5.04	6.23	6.57	6.19	5.70	4.90	3.64	1.65	0.74			
Ave Lowest P_{def}	mm/day												--		
15-Day Moving Average ^g	1.64	0.50	0.41	1.66	2.86	3.32	4.52	3.59	2.21	1.17	0.78	1.52			
7-Day Moving Average ^h	3.07	1.61	-0.67	0.32	1.34	1.62	3.92	2.68	1.11	0.13	1.90	2.59			
3-Day Moving Average ⁱ	5.54	3.31	-2.66	2.09	-1.05	0.86	2.46	1.22	0.66	1.60	3.80	4.95			
Special normal distribution parameters for monthly, seasonal, and annual intervals															
Skew ^m	0.34	0.50	-0.28	0.01	-0.26	0.09	0.67	-0.38	0.87	0.15	0.28	0.20	-0.41	0.00	-0.41
Kurtosis ^o	1.02	3.18	0.90	3.14	0.93	2.06	2.13	1.06	3.20	0.66	2.35	0.83	2.77	0.00	2.77

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the green up in the spring. It is not applicable for entries without a growing season.

^c Mean of the average daily value for month

^d Mean of the fourteen 15-day period averages contained in the month

^e Mean of the twenty three 7-day period averages contained in the month

^f Mean of the twenty seven 3-day period averages contained in the month

^g Mean of the highest/lowest 15-day period average in month

^h Mean of the highest/lowest 7-day period average in month

ⁱ Mean of the highest/lowest 3-day period average in month

^j This value represents the *mean value* for the parameter for the month over the 'normal' period of record. Generally, the 'normal' period is the last thirty years with data.

^k This value represents the *standard deviation* for the parameter for the month over the 'normal' period.

^l This value represents the *value* for the parameter that has a 20% chance of being exceeded that month during any particular year. Conversely, there is an 80% chance that the parameter value will be less than the *value* shown.

^m This value represents the *value* for the parameter that has a 80% chance of being exceeded that month during any particular year. Conversely, there is an 20% chance that the parameter value will be less than the *value* shown.

ⁿ This value represents the *skewness (asymmetry) of the distribution of the parameter values* for the month (year) over the 'normal' period. A value near zero indicates that the distribution approximates a normal (Gaussian) and symmetrical distribution. A negative skew indicates that the parameter distribution has relatively few low values compared to high values. A positive skew indicates that the distribution has relatively few high values compared to the number of low values. A skew value near 1 indicates that the underlying distribution approximates a lognormal distribution.

^o This value represents the *kurtosis* of the parameter value distribution for the month (year) over the 'normal' period. Kurtosis is a measurement of the height to width ratio of the probability distribution, or the *peakedness (slenderness)*. A normal (Gaussian) distribution has a kurtosis of 3. A high kurtosis distribution has a sharper peak and longer tails, while a low kurtosis distribution has a more rounded peak and shorter tails.

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The citation for the evapotranspiration data used from this site should be: Allen, Richard G. and Clarence W. Robison, 2012. *Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho: Supplement updating the Time Series through December 2008*. Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.

Questions regarding the data should be addressed to [Clarence W. Robison](#) or [Richard G. Allen](#), University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

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1			8 ½ x 11 vicinity map
1			8 ½ x 11 layout
1			Evaporation Calcs
1			ET Idaho 2012 Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

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