

State of Idaho
Department of Water Resources
Water Right License

WATER RIGHT NO. 37-22975

Priority: June 26, 2001

Maximum Diversion Rate: 0.04 CFS

It is hereby certified that BLACK BUTTE HILLS LLC
C/O GREGORY VIK
PO BOX 1607
BELLEVUE WA 98009

has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated June 26, 2001; and has submitted Proof of Beneficial Use on November 17, 2004. An examination confirms water is diverted from:

SOURCE

GROUND WATER

and a water right has been established as follows:

BENEFICIAL USE

STOCKWATER

PERIOD OF USE

01/01 to 12/31

DIVERSION RATE

0.04 CFS

LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER SE1/4NE1/4 Sec. 33, Twp 01S, Rge 15E, B.M. CAMAS County

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
01S	15E	33				X													

CONDITIONS OF APPROVAL

1. The quantity of water under this right for stockwater use shall not exceed 11,618 gallons per day.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

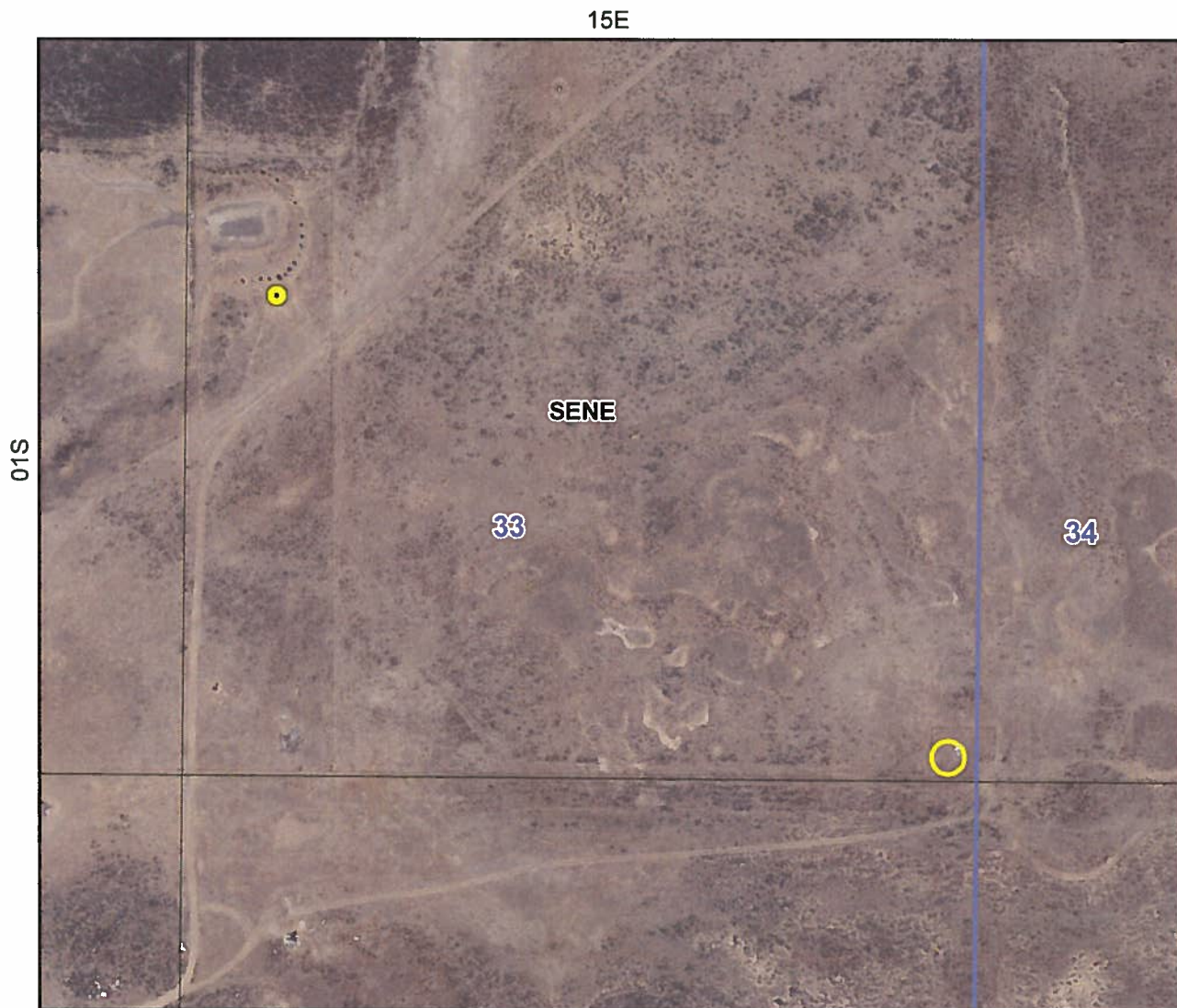
Signed this 9th day of February, 20 16.



SHELLEY KEEN, Manager
Water Rights Section

State of Idaho
Department of Water Resources
Attachment To Water Right License
37-22975

This map depicts the STOCKWATER place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections
-  Quarter Quarters

0 0.035 0.07 0.14 Miles





State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

February 10, 2016

BLACK BUTTE HILLS LLC
C/O GREGORY VIK
PO BOX 1607
BELLEVUE WA 98009

RE: License Nos. 37-20552, 37-20553, 37-22975 & 37-22976

Issuance of Licenses

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right Licenses confirming that water rights has been established in accordance with your permits. Please be sure to thoroughly review the conditions of approval and remarks listed on your licenses. Also enclosed are copies of the approved applications for amendment.

The licenses are PRELIMINARY ORDERS issued by the Department pursuant to section 67-5243, Idaho Code. They can and will become final orders without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at 208-287-4951.

Sincerely,

Pamela Skaggs

Water Rights Supervisor

Enclosure(s)

CERTIFICATE OF SERVICE

I hereby certify that on February 11, 2016, I mailed true and correct copies, postage prepaid, of the foregoing PRELIMINARY ORDERS (**Approved Licenses**) to the person(s) listed below:

RE: WATER RIGHT NOS. 37-20552, 37-20553, 37-22975 & 37-22976

**BLACK BUTTE HILLS LLC
C/O GREGORY VIK
PO BOX 1607
BELLEVUE WA 98009**



**Darla Block
Technical Records Specialist**

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was not held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "Preliminary Order" issued by the department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) The petition for reconsideration is disposed of; or
- (b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

MEMORANDUM

TO: File 37-20552 and 37-22975

FROM: Daniel Nelson – Staff Hydrologist

DATE: February 8, 2016

SUBJECT: Supplemental Licensing Review for 37-20552 and 37-22975

It was determined during administrative review that maintaining a combined condition on both water rights 37-20552 and 37-22975 limiting them to 13,000 gallons per day would be difficult. It was determined that it would be best to limit 37-20552 to the amount of storage and evaporation losses, since those components are not controllable. It was also determined, to limit the diversion volume for 37-22975 to remainder of the daily volume that could be provided after the evaporation losses from the ponds.

To accomplish this task, we needed to determine the amount of evaporation from the ponds and subtract that amount from the limitation of 13,000 gallons per day. Using the information supplied by the field examiner, I determined that the daily evaporation or maintenance flows needed to maintain the ponds was 0.0042 acre-feet or 1,382 gallons per day. Please see the attached spreadsheet for the calculations.

Therefore, the condition limiting the volume for water right 37-22975 would be 11,618 gallons per day ($13,000 \text{ gpd} - 1,382 \text{ gpd} = 11,618 \text{ gpd}$). The condition on water right 37-22975 will be as follows:

The quantity of water under this right for stockwater use shall not exceed 11,618 gallons per day.

The condition limiting the total daily water use to 13,000 gallons per day when combined with 37-22975 will be removed from water right 37-20552.

Condition 123 addressing the fluctuations of ground water only applies to the ponds, so it should not be included on water right 37-22975, since it is diverted from a well. This condition will not be included on the license for water right 37-22975.

On water right 37-20552, condition 220 will be altered to describe only the surface area, since condition 219 describes the system capacity.

Total Storage Calculations

FILE NUMBER	37-20553
REVIEWER	Dan Nelson
DATE	2/8/2016

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	1.80	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	2.5	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.
Flow Rate into Pond (CFS)	0.04	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	4.31	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.0042	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Required Daily Maintenance Volume (Gallons/Day)	1382	This number was calculated by multiplying the Required Daily Maintenance volume by 325,850. It is listed as in Gallons per Day.

MEMORANDUM

TO: File 37-20552

FROM: Daniel Nelson – Staff Hydrologist

DATE: September 14, 2015

SUBJECT: Licensing Review for 37-20552

This is the licensing review of the field exam submitted by Sandy Hemenway formerly in our state office. The field exam was done in 2012. The system associated with this permit allowed water to be diverted from a well that supplies water to stockwater tanks and to several small stockwater ponds. The field exam has some issues that need to be addressed to prior to licensing of the permit.

Development of Permit:

The application for this permit was received by the Idaho Department of Water Resources (Department) on June 26, 2001. The permit was then assigned to South Cover Ventures L.L.C. on May 10, 2004. The permit was approved on July 24, 2004. Proof of beneficial use was received on September 18, 2004. The permit was assigned again to Black Butte Hills L.L.C. on December 6, 2005.

In the field exam report, Ms. Hemenway stated that there was an inoperable well with a 1 ½ inch poly pipe to a 250 gallon stockwater tank. Ms. Hemenway also stated that the ponds were fed by shallow ground water and were not connected into the well system. Therefore, this permit needs to be split into two permits with the first split for the stockwater storage (Stockwater Storage Split 37-20552) and the second split for the stockwater use (Stockwater Split – 37-22975) for the well to the stockwater tanks.

Therefore, each of the splits will be licensed differently as shown below. The splits were completed at the time of the writing of this memo, so I describe them separately as Stockwater Storage Split and Stockwater Split.

Diversion Rate:

Stockwater Storage Split – 37-20552:

Ms. Hemenway stated in her field exam, that no diversion to storage would be needed, since the ponds collect water from shallow ground water. Apparently, the well did not supply water to the ponds, so I agree with this assessment for the storage portion of the split. **Therefore, there will be no diversion rate identified with the Stockwater Storage Split – 37-20552 split of the permit.**

Stockwater Split – 37-22975:

The stockwater portion of the split would require a diversion rate, since the well diverted water to the stockwater tanks. Ms. Hemenway was unable to determine the size of pump in the well, so she tried to determine the flows based off the pipeline used to deliver the water. This is an unacceptable measurement method. I performed various theoretical calculations on the attached sheet that shows that even with a ½ Hp pump, the system could deliver the 0.04 cfs for stockwater. **Therefore, I am recommending a diversion rate of 0.04 cfs for the Stockwater Split – 37-22975 of this permit.**

Diversion Volume:

Stockwater Storage Split – 37-20552:

Ms. Hemenway supplied a pond spreadsheet with her field report, but included all of the ponds in a single spreadsheet instead of separate spreadsheets for each pond. The total volume required to fill the ponds is 1.8 af, and the evaporation losses would be 0.6 af for a total of 2.4 af. The permit limited the storage amount to 1.9 af, so Ms. Hemenway recommended a storage volume of 1.8 af for a one time fill with 0.1 af for evaporation. Although the method was crude, the total for the ponds would be over the 1.9 af, **therefore I recommend that the Stockwater Storage Split – 37-20552 of this permit be limited to 1.9 af.**

Stockwater Split – 37-22975:

Ms. Hemenway recommended 13.4 af of water for the stockwater portion of this permit. However, the permit has a condition that limits the use to 13,000 gpd limiting the maximum volume to 14.6 af per year ($[13,000 \text{ gpd} \times 365 \text{ days}] / 325850 = 14.6 \text{ af per year}$). With a 1.9 af limitation in the storage portion alone, this portion of the permit would need to be limited to 12.7 af ($14.6 \text{ af} - 1.9 \text{ af} = 12.7 \text{ af maximum volume available}$). **Whereas this permit has a combined volume limit of 13,000 gpd, a volume is not required to be licensed under this permit.**

Combined Limitation Condition:

The permit had a condition that allowed this permit to be approved in a moratorium area because the total use would be limited to 13,000 gallons per day (gpd). By splitting the original permit, a combined limitation condition is needed to ensure that the total combined volume for these two rights does not exceed 13,000 gpd.

Point of Diversion and Place of Use:

Ms. Hemenway correctly determined the points of diversion and place of use for the ponds and the stockwater. The permit lists the correct 40 acre tracts, but it does not describe the correct number of points of diversion or the correct place of use for the stockwater. Therefore the permits will be recommended for licensing as follows:

Stockwater Storage Split – 37-20552:

The stockwater storage recommendation will show the points of diversion as the center of each pond. Therefore, there will be one point of diversion in the SENE of Section 33, Township 15 East, and three points of diversion in the NENE of Section 33, Township 1 South, Range 15 East. The place of use will show both the SENE and the NENE of Section 33, Township 1 South, Range 15 East as the place of use.

Stockwater Split – 37-22975:

The stockwater recommendation will show one point of diversion the SENE of Section 33, Township 1 South, Range 15 East, and the place of use will show one place of use in the SENE of Section 33, Township 1 South, Range 15 East as the place of use. This right will be limited to the well and the stockwater storage tank.

Conditions:

Stockwater Storage Split – 37-20552:

Conditions 1 (26A), 2 (046), and 3 (X02) will be removed at licensing. Condition 4 (071) will be changed to condition N19, and limit water rights 37-20552 and 37-22975 when combined to 13,000 gpd. Condition 5 will be changed to the standard condition 220. Condition 6 (123) will be carried forward to licensing as the condition was crafted in the permit. Condition 219 will be added to address the evaporation loss allowance of the ponds.

Stockwater Split – 37-22975:

Conditions 1 (26A), 2 (046), 3 (X02), and 5 will be removed at licensing. Condition 4 (071) will be changed to condition N19, and limit water rights 37-20552 and 37-22975 when combined to 13,000 gpd. Condition 6 (123) will be altered to state the following:

Ground water diverted under this right is subject to fluctuations of the water table cause by changes in the flow of local streams and by diversions under prior ground water rights. This right does not guarantee the maintenance of any particular ground water level.

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

6

Water Right No.: 37-20553
 Examiner: Dan Nelson
 Date of Field Exam: 9/8/2015

	Option 1	OPTION 2	Option 3	
P/D No.:				
PUMP HORSEPOWER	0.5	0.75	1	
BOOSTER HORSEPOWER	0	0	0	
PUMPING LEVEL	22	22	22	
DISCHARGE PRESSURE	10	10	10	
FRICTION	39	39	39	
RATE OF FLOW (cfs)	0.04	0.05	0.07	AVE
(gpm)	16.4	24.7	32.9	0.05 24.7

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.

Examiners Notes:

The field examiner was not able to determine the size of the pump in this well, but it is save to assume that the pump was a 0.5 to 1 Hp pump. According to the field examiner, this system open discharges into a stock tank. There is approximately 1,353 feet from the well to the stock tanks. I calculated a frction loss of 39 feet for this system. Open discharge systems usually run between 5 and 15 psi in order for water to exit the pipeline, so I used an average of 10 psi. I use a pumping water level of 22 feet, since this is the level where water was first encountered. I am concerned that this well is in the basalts and gets its water from cracks in the basalt formations, but there was no measurement done at the time the field exam, so I have to go a best guess. The pump test shows a diversion rate of 103 gpm was used, and states that the majority of the water is coming from 155 to 161 feet. Using these assumptions, the system appears to be able to supply between 0.04 cfs to 0.07 cfs. A recommendation of 0.04 cfs seems reasonable.

Calcu^lator^{edge}

now calculation made easy!



Calculate Pipe Friction Loss

Enter value, select unit and click on calculate. Result will be displayed.

Enter your values:

Flow Rate:
Diameter:
Pipe Length:
Pipe Material:

Result:

Pipe Friction Loss:

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