

CLAIM OF BENEFICIAL USE

for Permits claiming more than 0.1 cfs and All Transfers



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.wrd.state.or.us

**A fee of \$150 must accompany this form to be accepted for permits
with a priority date of July 9, 1987, or later. (ORS 536.050(1))**

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:
http://www.wrd.state.or.us/OWRD/WR/cwre_info.shtml#.

The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

If you have questions regarding the completion of this form, please call 503-986-0900 and ask for the Certificate Section.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see http://www.wrd.state.or.us/OWRD/mgmt_reimbursement_authority.shtml.

SECTION 1

GENERAL INFORMATION

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SALEM, OREGON

1. File Information

APPLICATION # (G, R, S or T) T-10653	PERMIT # (IF APPLICABLE) NA	PERMIT AMENDMENT # (IF APPLICABLE) NA
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2. Property Owner (current owner information)

APPLICANT/BUSINESS NAME Crook County Parks and Recreation District	PHONE NO. 541-447-1209	ADDITIONAL CONTACT NO. Fax 541-447-9894
ADDRESS 398 NE Fairview Street		
CITY Prineville	STATE OR	ZIP 97754
E-MAIL Maureen@ccprd.org		

If the current property owner is not the permit or transfer holder of record, it is recommended that an assignment be filed with the Department. **The COBU must be signed by the permit or transfer holder of record.**

3. Is the Property Owner the permit or transfer holder of record? **YES**

If "YES" the remainder of this item may be deleted.

Permit or transfer holder of record (this may, or may not, be the current property owner)

Are there additional permit or transfer holders of record? **NO**

4. Date of Site Inspection: **September 22, 2010**

5. Person(s) interviewed and description of their association with the project:

NAME	DATE	ASSOCIATION WITH THE PROJECT
Tom Garner	09-22-2010	District operator/installer

6. County: **Crook**

7. If any property described in the place of use of the permit or transfer final order is excluded from this report, identify the owner of record for that property (ORS 537.230(4)):

**Mark "NA" if there are no owners of property not included in this claim

OWNER OF RECORD		
NA		
ADDRESS		
CITY	STATE	ZIP

Are there additional Owners of Record?

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SECTION 2

SYSTEM DESCRIPTION

A. Points of Diversion/Appropriation

1. Point of diversion/appropriation name or number:

POINT OF DIVERSION/APPROPRIATION (POD/POA) NAME OR NUMBER (CORRESPOND TO MAP)	WELL LOG ID # FOR ALL WORK PERFORMED ON THE WELL (IF APPLICABLE)	WELL TAG # (IF APPLICABLE)
Direct Diversion #13 Crooked River (People's Ditch)	NA	NA

Attach each well log available for the well (include the log for the original well and any subsequent alterations, reconstructions, or deepenings)

2. Point of diversion/appropriation source and, if from surface water, the tributary:

POD/POA NAME OR NUMBER	SOURCE	TRIBUTARY
Direct Diversion #13	Crooked River	To Deschutes River

3. Developed use(s), period of use, and rate for each use:

POD/POA NAME OR NUMBER	USES	IF IRRIGATION, LIST CROP TYPE	SEASON OR MONTHS WHEN WATER WAS USED	RATE OR VOLUME FOR USE (CFS, GPM, OR AF)
Direct Diversion #13	Irrigation	Landscaping/lawn	April to October	0.05 CFS
Total Quantity of Water Used				0.05 CFS

4. Provide a general narrative description of the distribution works. This description must trace the water system from each point of diversion or appropriation to the place of use:

The point of diversion is the Peoples Irrigation dam on the Crooked River. The water is diverted into the People's Irrigation Ditch which flows through subject property on the southern side. The district has a screened gravity intake pipe placed in the canal which conveys water to a pond in the property maintained as a youth fishing pond by the district and the Oregon Department of Fish and Wildlife. The system has an intake pipe connecting to a pump well which has a submersible pump pumping water to the several irrigation lines watering the landscape features on the property. These include trees, lawn, riparian plantings and seepage/swale areas.

SECTION 2

SYSTEM DESCRIPTION (B through H)

Are there multiple PODs or POAs?

NO

If "YES" you will need to copy and complete Sections 2B through 2H for each POD/POA.

POD/POA Name or Number this section describes (only needed if there is more than one):

**Direct Diversion #13-Crooked River-
People's Ditch**

B. Place

1. Is the

of Use

right for municipal use?

NO

If "YES" the table below may be deleted.

TWP	RNG	MER	SEC	Q-Q	GLot	DLC	USE	IF IRRIGATION, # PRIMARY ACRES	IF IRRIGATION, # SUPPLEMENTAL ACRES
15S	16E	W.M.	6	SE,SE			Irrigation	2.0 Acres	
Total Acres Irrigated								2.0 Acres	

Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (Gov Lot), Quarter-Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, Gov Lot, and QQ.

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C. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion/appropriation to the place of use.

1. Is a pump used?

YES

If "NO" items 2 through item 6 may be deleted.

2. Pump Information

MANUFACTURER	MODEL	SERIAL NUMBER	TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE)	INTAKE SIZE	DISCHARGE SIZE
Berkeley	L50PAHM5 5-03	224-3022- 604	Submersible	4"	2"

3. Motor Information

MANUFACTURER	HORSEPOWER
Franklin Electric	3.0 HP

4. Theoretical Pump Capacity

HORSEPOWER	OPERATING PSI	LIFT FROM SOURCE TO PUMP *IF A WELL, THE WATER LEVEL DURING PUMPING	LIFT FROM PUMP TO PLACE OF USE	TOTAL PUMP OUTPUT (IN CFS)
3 HP	60 PSI	3 FEET	1 FOOT	0.14 CFS

5. Provide pump calculations:

See attachment #1 pump capacity calculation sheet on attachments.

6. Measured Pump Capacity (using meter if meter was present and system was operating)

INITIAL METER READING	ENDING METER READING	DURATION OF TIME OBSERVED	TOTAL PUMP OUTPUT (IN CFS)
NA			

Reminder: For pump calculations use the reference information at the end of this document.

7. Is the distribution system piped?

YES

If "NO" items 8 through item 11 may be deleted.

8. Mainline Information

MAINLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
3"	Total-245'	PVC	Buried
	Total-120'	PVC	Buried

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9. Lateral or Handline Information

LATERAL OR HANDLINE SIZE	LENGTH	TYPE OF PIPE	BURIED OR ABOVE GROUND
#1-110'2"-35'/1.5"-40'/1.25"-105'/1"	290'	PVC	Buried
#2-115'2"-125'/1.25"-145'/1"	385'	PVC	Buried
#3-120'2"-25'/1.5"-40'/1.25"-115'/1"	300'	PVC	Buried
#4-90'2"-80'/1.25"-90'/1"	260'	PVC	Buried
#5-125'2"-55'/1.25"-150'/1"	330'	PVC	Buried
#6-50'2"-55'/1.5"-15'/1.25"-85'/1"	205'	PVC	Buried
#7-110'2"-50'/1.5"-25'/1.25"-90'/1"	275'	PVC	Buried
#8-525'/1"	525'	PVC-Drip Line/Pond	Buried
#9-530'/1"	530'	PVC-Hand Valves	Buried

10. Sprinkler Information

SIZE	OPERATING PSI	SPRINKLER OUTPUT (GPM)	TOTAL NUMBER OF SPRINKLERS	MAXIMUM NUMBER USED	TOTAL SPRINKLER OUTPUT (CFS)
#1-3/16"	60	8.4	6	6	50.4
#2-3/16"	60	8.4	6	6	50.4
#3-3/16"	60	8.4	6	6	50.4
#4-3/16"	60	8.4	6	6	50.4
#5-3/16"	60	8.4	5	5	42.0
#6-3/16"	60	8.4	5	5	42.0
#7-3/16"	60	8.4	5	5	42.0

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Pivot Information

MANUFACTURER	MAXIMUM WETTED RADIUS	OPERATING PSI	TOTAL PIVOT OUTPUT (GPM)	TOTAL PIVOT OUTPUT (CFS)
NA				

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12. Additional notes or comments related to the system:

This system has a Weather Trak ET PRO2X controller (serial # 08007645) installed which controls the irrigation system. The system claims an 80% efficiency and is set at 50% plant utilization monitoring the weather, evaporation and transpiration rates. The system irrigates at night and operates the lines as needed to maintain the soil moisture and is not on a rotational basis. The system includes an ORIVAL Water Filter-OMNITROL 400 ORG-020-LE. The system operates at 60 PSI and feeds one station or line at a time. There are 7 stations utilizing sprinklers and 1 station which is a drip line for trees planted around the pond. There is also a buried line that has hand operated valves which discharges small amounts of water into small swales/seepage landscape areas which have riparian vegetation. There is an overflow line installed to protect the pond from overflow which discharges into a swale or seepage area if the water gets high enough. The system employs a 6" PVC underground feed from the Peoples Ditch to maintain the pond level. The line is laid very flat and the water level in the ditch appears to be the same as in the pond with the system acting as a siphon. The pump is a submersible set in a vertical 72" deep sealed 24" CMP pipe connected by 6" PVC line to the pond which acts a siphon with the pond. No groundwater enters the system at the pump station. The pump operates from the controller utilizing automatic valves to sprinkle irrigate the landscape features. The system was hand operated for my inspection using a manual override and appears to function properly and efficiently. There is a separate pump which circulates the water through the pond utilizing a small waterfall to aerate the water in the pond to maintain the fish plantings in the pond by ODF&W for juvenile fishing. That pump does not irrigate any features. The pond serves as a bulge in the system to feed the pump station and is not a reservoir in the usual sense. It has a small embankment around it which is gravel surfaced for access but it is an excavated pond with no dam.

D. Groundwater Source Information (Well and Sump)

1. Is the appropriation from ground water (well or Sump)? NO

E. Storage

1. Does the distribution system include in-system storage (i.e. storage tank, bulge in system / reservoir) YES

If "NO", item 2 and 3 relating to this section may be deleted.

If "YES" is it a: Storage Tank NO

Bulge in System / Reservoir YES

Complete appropriate table(s) below, unused table may be deleted.

2. Storage Tank:

MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.)	CAPACITY (IN GALLONS)	ABOVE GROUND OR BURIED
NA		

3. Bulge in System / Reservoir:

RESERVOIR NAME OR NUMBER (CORRESPOND TO MAP)	APPROXIMATE DAM HEIGHT	APPROXIMATE CAPACITY (IN ACRE FEET)
Fish Pond	No Dam-excavated pond	1.58 ACRE FEET

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F. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES

If "NO", items 2 through 4 relating to this section may be deleted.

2. Complete the table:

PIPE SIZE	PIPE TYPE	"C" FACTOR	AMOUNT OF FALL	LENGTH OF PIPE	SLOPE	COMPUTED RATE OF WATER FLOW (IN CFS)
6"	PVC	150	0.4	200 FEET	.002	0.365 CFS
6"	PVC	150	0.08	40 FEET	.002	0.365 CFS

3. Provide calculations:

See attachment #3 pipe calculator sheet on attachments.

4. If an actual measurement was taken, provide the following:

DATE OF MEASUREMENT	WHO MADE THE MEASUREMENT	MEASUREMENT METHOD	MEASURED QUANTITY OF WATER (IN CFS)
NA			

Attach measurement notes.

G. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

YES

If "NO", items 2 through 4 relating to this section may be deleted.

2. Complete the table:

CANAL OR DITCH TYPE (MATERIAL)	TOP WIDTH OF CANAL OR DITCH	BOTTOM WIDTH OF CANAL OR DITCH	DEPTH	"N" FACTOR	AMOUNT OF FALL	LENGTH OF CANAL / DITCH	SLOPE	COMPUTED RATE (IN CFS)
Unlined Channel- Native Earth	22 FEET	10 FEET	3.5 FEET	0.03	0.2 FEET	100 FEET	0.002	218.9 CFS

3. Provide calculations:

See attachment #2 ditch capacity calculator sheet on attachments.

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4. If an actual measurement was taken, provide the following:

DATE OF MEASUREMENT	WHO MADE THE MEASUREMENT	MEASUREMENT METHOD	MEASURED QUANTITY OF WATER (IN CFS)
NA			

Attach measurement notes.

H. Reservoir

1. Does the claim involve a reservoir modified through a transfer?

NO

Reminder: This section should only be completed if the reservoir right has been modified through the transfer process. If the claim is for a permitted reservoir use the Claim of Beneficial Use form for reservoirs.

If "NO", items 2 through 9 relating to this section may be deleted.

SECTION 3 CONDITIONS

Please pay special attention to this section. All conditions contained in the permit, permit amendment, transfer final order, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits, transfer final orders, and any extension final orders contain any or all of the following dates; the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use is to be completed by. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit, extension or transfer final order:

	DATE FROM PERMIT OR TRANSFER	DATE ACCOMPLISHED*	DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS
ISSUANCE DATE	March 31, 2010		
BEGIN CONSTRUCTION (A)		May, 2009	Construction began under Temporary Transfer Special Order Volume 77 Pages 947-949
COMPLETE CONSTRUCTION (B)	October 1, 2011	June, 2009	Construction of pond and pump system completed under Temporary Transfer
COMPLETE APPLICATION OF WATER (C)	October 1, 2011	September, 2009	All features and vegetation established and in operation by this date under Temporary Transfer

* MUST BE WITHIN PERIOD BETWEEN PERMIT, TRANSFER FINAL ORDER, OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

2. Is there an extension final order(s)?

NO

If "NO", you may delete item 3 in this section.

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4. Initial Water Level Measurements:

a. Was the water user required to submit an initial static water level measurement? **NO**

If "NO", items 4b through 4d relating to this section may be deleted.

5. Annual Static Water Level Measurements:

a. Was the water user required to submit annual static water level measurements? **NO**

If "NO", items 5b through 5e relating to this section may be deleted.

6. Pump Test (Required for most ground water permits prior to issuance of a certificate)

a. Did the permit require the submittal of a pump test? **NO**

If "NO", items 6b through 6d relating to this section may be deleted.

7. Measurement Conditions:

a. Does the permit, permit amendment, transfer final order, or any extension final order require the installation of a meter or approved measuring device? **NO**

If "NO", items 7b through 7f relating to this section may be deleted.

8. Recording and reporting conditions

a. Is the water user required to report the water use to the Department? **NO**

If "NO", item 8b relating to this section may be deleted.

If the reports have not been submitted, attach a copy of the reports if available.

9. Fish Screening

a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion? **NO**

If "NO", items 9b through 9e relating to this section may be deleted.

10. By-pass Devices

a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion? **NO**

If "NO", items 10b and 10c relating to this section may be deleted.

11. Other conditions required by permit, permit amendment final order, extension final order, or transfer final order

a. Were there special well construction standards? **NO**

b. Was submittal of a ground water monitoring plan required? **NO**

c. Was the water user required to restore the riparian area if it was disturbed? **NO**

d. Was a fishway required? **NO**

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- e. Was submittal of a letter from an engineer required prior to storage of water? **NO**
- f. Was submittal of a water management and conservation plan required? **NO**
- g. Other conditions? **NO**

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

NA

SECTION 4 VARIATIONS

Include a description of variations from the permit, permit amendment final order, extension final order, or transfer final order. (i.e. *"The permit allowed three points of diversion. The water user only developed one of the points."* or *"The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres."*)

No variations were noted during the inspection. The terms of the transfer appear to have been complied with and completed.

SECTION 5 ATTACHMENTS

If you are attaching any documents to this report, provide a list:

ATTACHMENT NAME	DESCRIPTION
#1 Pump	Pump Capacity Calculation Sheet-C.5
#2 Ditch	Ditch Capacity Calculator Sheet-G.3
#3 Pipe	Pipe Capacity Calculator Sheet-F.3
#4 Sprinkler 13/64	Sprinkler Capacity Calculator-C.10
#5 Sprinkler 3/16	Sprinkler Capacity Calculator-C.10
#6 Rainbird Sprinkler	Rainbird 7005 Series Nozzle Performance Chart
#7 Intake	6" Intake pipe in People's Ditch feeding pond
#8 Pond	Pond looking south
#9 Features	Features including grass lawn, tree plantings, swale
#10 Features	Features including grass lawn, plantings, overflow swale
#11 Aerial Photo	Crook County GIS aerial photo dated 2009

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SECTION 6
CLAIM SUMMARY

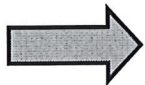
POD / POA NAME OR #	MAXIMUM RATE AUTHORIZED	CALCULATED THEORETICAL RATE BASED ON SYSTEM	AMOUNT OF WATER MEASURED	USE	# OF ACRES ALLOWED	# OF ACRES DEVELOPED
Direct Diversion #13	0.05 CFS	0.14 CFS	NA	Irrigation	2.0 Acres	2.0 Acres

SECTION 7
CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

A survey grade Trimble 5700 GPS unit was used to tie and map the pond, graveled areas and irrigation lines including sprinklers and valves. An aerial photo from the Crook County GIS department utilizing photos obtained from NRCS was used to confirm locations. The GIS photos do not have the source, date, series and aerial photo identification number as that information has been removed when the GIS compiles their maps.



Map Checklist

Please be sure that the map you submit includes ALL the items listed below.
(Reminder: Incomplete maps and/or claims may be returned.)

- Map on polyester film.
- Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- Township, Range, Section, Donation Land Claims, and Government Lots
- If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- Locations of fish screens, fish by-pass devices, meters and measuring devices in relationship to point of diversion or appropriation.
- Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
- Point(s) of diversion or appropriation (illustrated and coordinates)
- Tax lot boundaries and numbers

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- Source illustrated if surface water
- Disclaimer (“This map is not intended to provide legal dimensions or locations of property ownership lines”)
- Application and permit number or transfer number
- North arrow
- Legend
- CWRE stamp and signature

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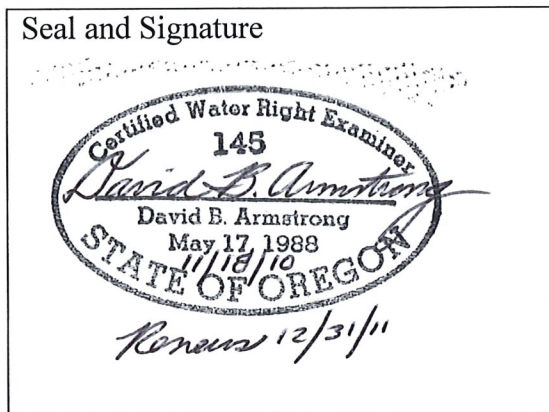
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SECTION 8 SIGNATURES

CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



CWRE NAME David B. Armstrong	PHONE No. 541-447-7791	ADDITIONAL CONTACT No. Fax 541-416-1602	
ADDRESS 267 NE Second Street Suite 100			
CITY Prineville	STATE OR	ZIP 97754	E-MAIL dave@armstrongsurveying.net

Permit or Transfer Holder's of Record Signature or Acknowledgement

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

SIGNATURE	PRINT OR TYPE NAME	DATE
<i>Maureen Crawford</i>	MAUREEN CRAWFORD	11-19-10

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T-10653
ATTACHMENT # 1

Pump Capacity Calculation Sheet

using Department designed formula:

$(hp)(\text{efficiency}) / (\text{lift} + \text{psi head}) = \text{capacity in cfs}$

Efficiency:

Centrifugal = 6.61

Turbine = 7.04

Data Entry (fill in underlined blanks)

HP = 3
Efficiency = 7.04
Lift = 4
PSI = 60

Results Calculated

$(hp)(\text{efficiency}) = 21.12$
Head based on psi = 152.4
Total dynamic head = 156.4
(head + lift)

Pump Capacity = 0.14 feet per second

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ATTACHMENT # 2

Ditch Capacity Calculator

using Manning's Formula

Data Entry (fill in underlined blanks)

Top Width = 22 feet
Bottom Width = 10 feet
Depth = 3.5 feet
Fall = 0.2 feet per 100 feet of distance
Grade = 0.002, or 0.2%
n Factor = 0.03

Results calculated

Area of cross-section = 56 square feet
Wetted Perimeter = 23.89244 feet
Hydraulic Radius = 2.343837
Velocity = 3.909 feet per second

Calculated Ditch Capacity = 218.9 cubic feet per second

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Pipe Capacity Calculator

for pipes flowing full, using the Hazen-Williams Formula

Data Entry (fill in underlined blanks)

Interior Diameter = 6 inches, or 0.5 feet
Roughness Coefficient (C) = 150
Fall = 0.2 feet per 100 feet of distance
Grade = 0.002, or 0.2%

Results calculated

Area of cross-section = 0.19635 square feet
Wetted Perimeter = 1.570796 feet
Hydraulic Radius = 0.125
Velocity = 1.860442 feet per second

Pipe Capacity = 0.365 cubic feet per second

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