

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 79-14097

Exam Date: 8/26/2011

1. Current Owner: DONALD SICKELS
PO BOX 6
WHITE BIRD ID 83553
(208)839-2653

And/Or

CHARLOTTE SICKELS
PO BOX 6
WHITE BIRD ID 83553
(208)839-2653

2. Accompanied by: Donald Sickels
Phone No: (208) 839-2653
Address: PO Box 6, White Bird, ID 83553 (****physical address: 226 Sage Lane, White Bird, ID 83553)
Relationship to Permit Holder: self

3. **SOURCE**

WHITE BIRD CREEK

TRIBUTARY

SALMON RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None; 79-14053 City of White Bird (service area boundary—internal use only)
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

WHITE BIRD CREEK SW1/4SW1/4 Sec. 14, Twp 28N, Rge 01E, B.M. IDAHO County

Method of Determination: Garmin GPS map 76S

2.

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
28N	01E	14											X						

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
28N	01E	14											X						

Method of Determination:

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

Well or Diversion

<u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
A0016830	Flotier	1.5 Hp	model #C48L2EC11C3		1 ½ inch discharge
Booster pump	Flotec	1.0 Hp	model #FP5162-08		1 ¼ inch discharge

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS1. **Measurements:**

(7) Number 6 Nelson 6000 series nozzles @ 1 time @ 40 psi
(2.4 gpm X 0.00223) X 7 = 0.04 cfs

Theoretical:

[(8.8) X (1.5 Hp) X (0.70 eff)]/[(55 ft lift) + (40 psi X 2.31)] = 0.06 cfs

Pipe Conversion (for 1 ¼ inch pipe):

Q = 5 X 3.1416 X (r-squared)

5(3.1416) X (0.0625)squared = 0.06 cfs

RECOMMEND 0.04 cfs Total Diversion Rate (as permitted)

E. VOLUME CALCULATIONS1. **Volume Calculations:**

IDWR Standard for Domestic (external only) = **0.6 af**

Stockwater (5 mixed head: 5 horses or 5 cattle or sometimes mixed head with a maximum of 5 head, per Mr. Sickels. Both horses and cattle are at 12 gpd).

Vir = (5 head X 12 gpd X 230 Days)/325,850 = 0.042 = 0.1 af (minimum allowed)

Vdr = 0.02 X 230 X 1.9835 = 9.1 af

V = 0.1 af

RECOMMEND: Domestic 0.6 af + Stockwater 0.1 af = 0.7 af Total Annual Volume

F. NARRATIVE/REMARKS/COMMENTS

1 1/2 inch screened intake at White Bird Creek (located under the bridge as you come into town), to a 1.5 Hp Flotier 1-phase model C4862EC11C3 pump, with 1 1/2 inch discharge that goes to a 1 1/2 inch ABS buried line (3 lines are buried, with 2 of them being replacement lines) that goes under the street and up the hill to the POU (55 ft lift) to a 1 Hp Flotec model FP5162-08 1 1/4 inch discharge booster pump, that discharges to 1 1/4 inch PVC and (7) Hunter 600 nozzles going to the northwest (that run at 40 psi). There is also a 3/4 inch PVC buried line, 10 nozzles and 15 bubblers going around the house on the east and south sides. There is a 1 1/2 inch line that goes over to the (1) 100 gallon and (1) 150 gallon stock tanks located in the property below the hill where the home is located. Stockwater is for 5 head (he usually has either 5 horses or 5 cows, or sometimes a mix of each).

Have conditions of permit approval been met? ☒ Yes ☐ No

Condition 029 (there is a 1 1/2 inch screened intake at the White Bird Creek).

041 (lawn irrigation is in connection with a home); 070 (not exceeding 1/2 acre);

X01 domestic/external only (internal use is through the City of White Bird municipal system).

G. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	03/15 to 10/31	0.020 CFS	0.1
DOMESTIC	03/15 to 10/31	0.020 CFS	0.6
<u>Totals:</u>		0.040 CFS	0.7 AF

2. Recommended Amendments

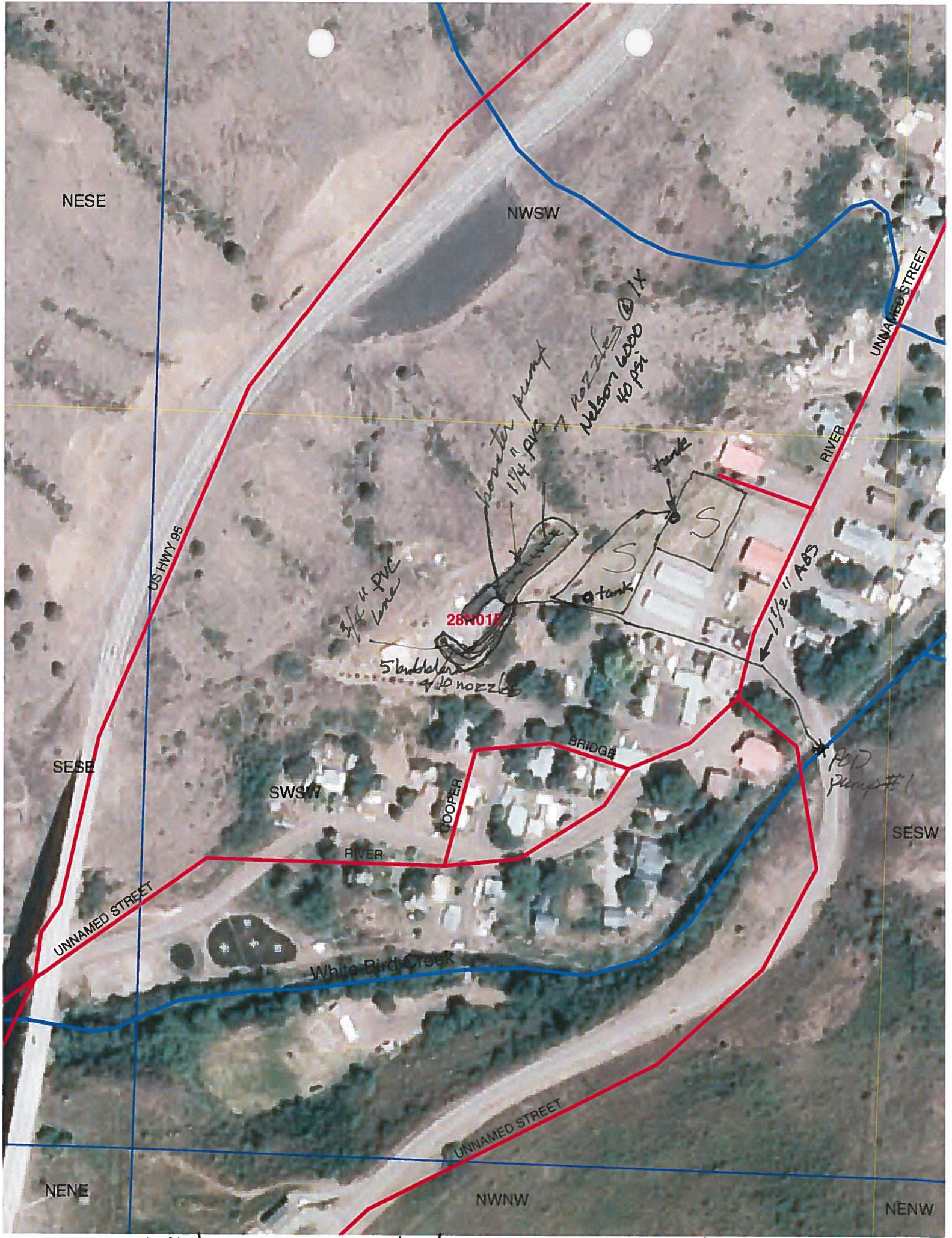
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

H. AUTHENTICATION

Field Examiner's Name Sandy Hemenway Date 9/12/2011

Reviewer _____ Date _____



NESE

NWSW

US HWY 95

UNNAMED STREET

RIVER

28N01E

horizontal pump
1 1/4" pvc
7 nozzles
Nelson 6000
40 psi
3/4" pvc line
5 bubbles
4 1/2 nozzles

tank

BRIDGE

COOPER

RIVER

SWSW

SESE

UNNAMED STREET

ABD pump #1

SESW

White Bird Creek

UNNAMED STREET

NENE

NWNW

NENW



1 1/2"
Screen
intake

08/26/2011



POD

1.5 HP
Flotier
1 phase
A48L2EC-
1163PDC
1 1/2"
discharge

55' lift
to pool,
+ to
booster
pump

08/26/2011

79-14097 Sickels

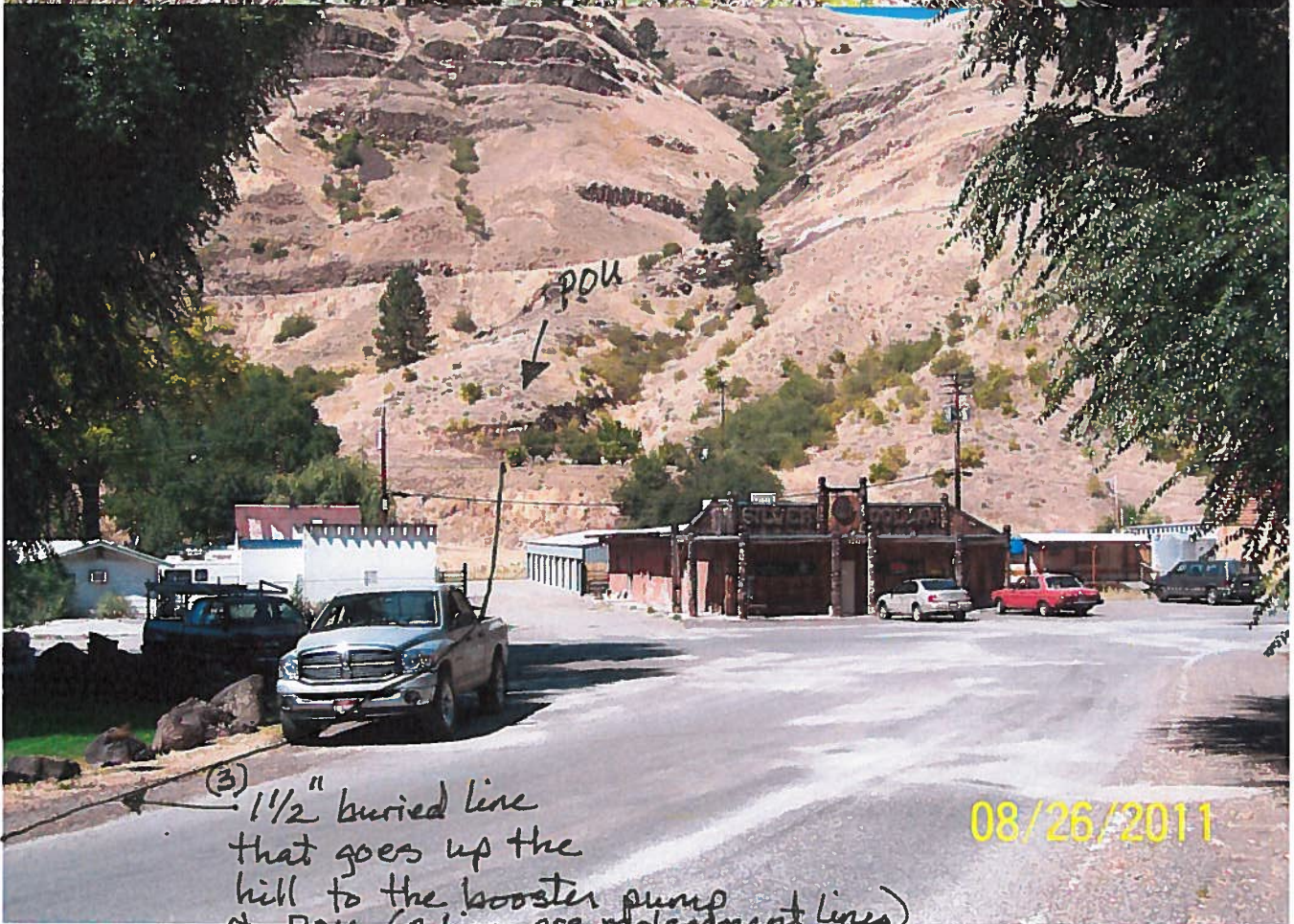
S. Hemenway



(3) 1 1/2"
ABS
buried
lines
(2 are
replacement
lines)

55' lift
to POU
+ to the
booster
pump

08/26/2011



(3) 1 1/2" buried line
that goes up the
hill to the booster pump
+ POU (2 lines are replacement lines)

08/26/2011



POU
 (10)
 6000
 Nelson
 nozzles
 +
 (5)
 bubblers
 for
 these
 2
 sections



POK
1 1/4"
buried
PVC
to (7)
Nelson
6000
nozzles
at 40psi

08/26/2011



Booster
Pump:

Flotec
FP5162-1
1 Hp
1 1/4"
dischar

08/26/2011

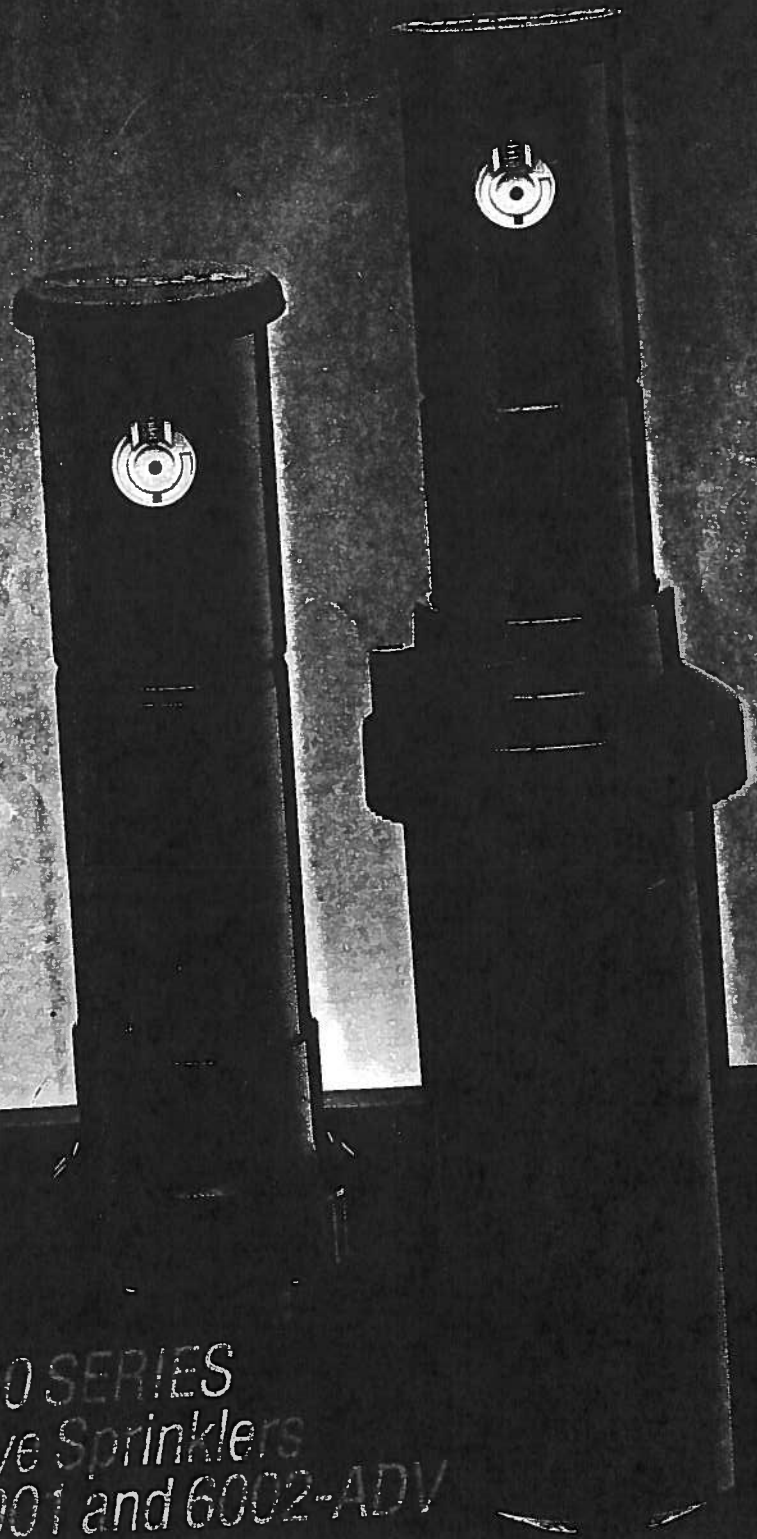


Stockwater
POU

(1) 100 +
(1) 150
gallon
stock
tank

08/26/2011

NELSON



Nelson
PRO 6000 SERIES
Gear Drive Sprinklers
6000, 6001 and 6002-ADV

*Sprinkle
system*

HUNTER OF NELSON POP- TYPE - IMPACT OR GEAR DRI

Performance Data Standard Nozzles - 25-Degree Trajectory

Nozzle Number	PSI	Radius	GPM	Nozzle Number	PSI	Radius	GPM
 1	30	28'	.5	 7	30	36'	2.6
	40	29'	.6		40	40'	3.0
	50	29'	.7		50	42'	3.4
	60	30'	.8		60	42'	3.7
 2	30	29'	.7	 8	30	37'	3.2
	40	30'	.8		40	40'	3.7
	50	30'	.9		50	43'	4.2
	60	31'	1.0		60	44'	4.6
 3	30	30'	.9	 9	30	38'	4.2
	40	31'	1.0		40	43'	4.9
	50	31'	1.2		50	46'	5.5
	60	32'	1.3		60	47'	6.0
 4	30	32'	1.2	 10	40	45'	6.0
	40	33'	1.4		50	48'	6.8
	50	34'	1.6		60	49'	7.6
	60	34'	1.8		70	51'	8.2
 5	30	34'	1.6	 11	40	46'	8.0
	40	36'	1.8		50	48'	8.9
	50	38'	2.0		60	50'	9.8
	60	38'	2.2		70	51'	10.5
 6	30	36'	2.0	 12	40	46'	11.4
	40	38'	2.4		50	48'	12.2
	50	40'	2.7		60	50'	13.2
	60	40'	2.9		70	52'	14.4

Data represents test results in zero wind. Adjust for local conditions.
Optimum distribution efficiency is at 50 PSI.
Radius can be reduced by up to 30% with nozzle retaining screw.

Low Angle Nozzles - 13-Degree Trajectory

Nozzle Number	PSI	Radius	GPM	Nozzle Number	PSI	Radius	GPM
 4	30	22'	1.4	 8	30	31'	3.4
	40	24'	1.7		40	34'	3.9
	50	26'	1.8		50	37'	4.4
	60	28'	2.0		60	38'	4.7
 5	30	25'	1.6	 9	30	33'	4.3
	40	27'	1.9		40	37'	5.0
	50	28'	2.1		50	40'	5.6
	60	30'	2.3		60	42'	6.1
 6	30	27'	2.1	 10	40	38'	6.5
	40	30'	2.5		50	40'	7.3
	50	33'	2.8		60	42'	8.0
	60	35'	3.0		70	44'	8.6
 7	30	29'	2.8	 P	Blank nozzle plug for turning off selected sprinklers during repairs, maintenance, etc.		
	40	32'	3.1				
	50	35'	3.5				
	60	37'	3.8				

Data represents test results in zero wind. Adjust for local conditions.
Optimum distribution efficiency is at 50 PSI.
Radius can be reduced by up to 30% with nozzle retaining screw.

Matched Precipitation GPM at 50 PSI

Square Spacing	90° Nozzle No.	90° GPM	180° Nozzle No.	180° GPM	360° Nozzle No.	360° GPM
25'	1	.7	3	1.2	6	2.7
30'	2	.9	5	2.0	8	4.2
35'	3	1.2	6	2.7	9	5.5
40'	4	1.6	7	3.4	10	6.8
45'	5	2.0	8	4.2	11	8.9

When the arc/nozzle combinations are spaced as indicated, the precipitation rate will be approximately .4"/hr. at 50 PSI.