

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9476

Exam Date: 08/31/2021

1. Current Owner:
JAMES R JOHNSON PO BOX 1773 SANDPOINT ID 83864-0902
2. Accompanied by: James Johnson
Phone No: 831-917-6823
Address: Same as above
Relationship to permit Holder: Permit holder

3. **SOURCE:**
GROUND WATER

Method of Determination: Arcmap and DRG.

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
95-8456	SPRING	DOMESTIC	LICENSE

Comments: Licensed right 95-8456 uses spring water for domestic use that was issued with a 40-acre tract POU shape that overlaps this permit's POU, but is not associated with the applicant's property nor a concern for overlap.

2. Other water rights with the same point-of-diversion: NO Overlap

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

GROUND WATER SW¼ NW¼, Sec. 27, Twp 56N, Rge 03W, B.M. BONNER County

Method of Determination: GPS; POD is a groundwater well D0053639 located at -116°41.5734, 48°10.5406.

PLACE OF USE: IRRIGATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	03W	27						0.3	1.3										1.6

Total Acres: 1.6

PLACE OF USE: DOMESTIC

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
56N	03W	27						X											

Method of Determination: Field exam and Arcmap aerial imagery.

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 ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
D0053639	FRANKLIN	1.5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5-GAL BUCKET TEST						

2. Measurements: Three 5-gallon bucket tests were completed from a frost-free hydrant located at the well, with average of three resulting in a diversion rate of 5 gal / 8.58 sec x 60 sec/min = 34.97 gpm = **0.08 cfs**, considering department rounding standards.

E. FLOW CALCULATIONS

Measured Method: 5-GAL Bucket Test = (5 gal / 9.14 sec) x 60 sec/min = 32.82 gpm
 = (5 gal / 8.37 sec) x 60 sec/min = 35.85 gpm
 = (5 gal / 8.23 sec) x 60 sec/min = 36.45 gpm

Average of 3ea 5-GAL Bucket Tests = (32.82 gpm + 35.85 gpm + 36.45 gpm) / 3 = 35.04 gpm = 0.08 cfs considering department rounding standards.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 1.6 \text{ ac} \times 3.0 \text{ afa} = 4.8 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.08 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 34.0 \text{ af}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{4.8 \text{ af}}$$

2. Volume Calculations for Other Uses:

$$\text{Domestic annual volume} = \mathbf{0.6 \text{ af}}$$

$$\text{Maximum diversion volume} = 4.8 \text{ af (irrigation)} + 0.6 \text{ af (domestic)} = \mathbf{5.4 \text{ af}}$$

G. NARRATIVE/REMARKS/COMMENTS

Field exam conducted on 8/31/2021 with the permit holder, James Johnson, showed groundwater from a well being used for domestic and irrigation purposes. At the POD, well D0053639 uses a 1.5 hp Franklin pump motor to divert water; Three 5-gallon bucket tests were completed from a frost-free hydrant located at the well, with average of three resulting in a diversion rate of $5 \text{ gal} / 8.58 \text{ sec} \times 60 \text{ sec/min} = 34.97 \text{ gpm} = \mathbf{0.08 \text{ cfs}}$, considering department rounding standards which is recommended as the maximum diversion rate for licensing this permit. Each beneficial use is capped in diversion rate to the department standards – domestic use for 1 home is authorized 0.04 cfs, and irrigation of 1.6 acres is authorized 0.5 cfs. The combined beneficial use diversion rate on paper equal 0.09 cfs, but the applicant is limited to the pump performance verified at time of field exam, which is slightly less at 0.08 cfs.

The POD located in the NW¼NW¼ of Sec 27 was removed from the permit during licensing review. Mr. Johnson asserts he did not develop the 2nd POD during the development period of the permit. Water from the well routes east to the pump house, then tees with diverting works servicing the 1.3 acre fenced in garden in the SW¼NW¼ & one home and lawn space/garden area in the NW¼NW¼ of Section 27 respectively. The water main line from the pump house to the home has 3ea additional frost-free hydrants installed along the driveway for water access, but Mr. Johnson asserts he did not actively irrigate the hay fields during the permit development period. As such, the irrigation POU is being greatly reduced following the field exam and validation of active irrigation acreage.

The irrigation POU was observed during the field exam and sketched out on field maps during the exam. During licensing review, Arcmap aerial imagery was used to accurately trace out the irrigation acreage consisting of 1.6 acres between the fenced in garden and lawn/garden space around the home. The annual volume associated with the irrigation beneficial use equals $1.6 \text{ ac} \times 3.0 \text{ afa} = \mathbf{4.8 \text{ af}}$, which is recommended for licensing. Mr. Johnson uses 2" and 3" handline to sprinkler riser pipes and Nelson model R2000 sprinklers to irrigate the fenced in garden. Irrigation of a hoop covered garden for tomatoes and lawn space around the house is achieved using frost-free hydrant or hose bib to hose & sprinklers. The system was operated during the exam to demonstrate active irrigation. Mr. Johnson cited health issues which limited the amount of work he was able to do with the garden this year, but aerial imagery and row crop development clearly define the irrigation acreage toward licensing this right.

The domestic POU is defined as a double-wide trailer house which is served by the well. Photographs were taken during the exam, and Arcmap aerial imagery was used to trace out the POU at time of licensing. The Domestic annual volume equals $\mathbf{0.6 \text{ af}}$, and the maximum diversion volume recommended for licensing equals $4.8 \text{ af (irrigation)} + 0.6 \text{ af (domestic)} = \mathbf{5.4 \text{ af}}$.

Conditions 26A & 046 were removed from the permit during licensing review. Condition R62 was replaced with R66 to accurately describe small acreage diversion rate and volume metrics. All other conditions on the permit shall be carried forward to the license. Right 95-8456 uses spring water for domestic use that was licensed with a 40-acre tract POU shape that overlaps this permit's POU but is not associated with the applicant's property nor a concern for overlap. There are no additional overlap concerns for this water right.

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

H. RECOMMENDATIONS

1. Recommended Amounts

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
IRRIGATION	04/01 to 10/31	0.05 CFS	4.8 AF
DOMESTIC	01/01 to 12/31	0.04 CFS	0.6 AF

Totals: 0.08 CFS 5.4 AF

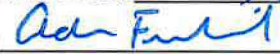
2. Recommended Amendments

☐ 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 ☒ None

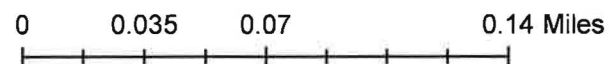
I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name  Date 9/29/2021

Reviewer  Date 10/20/2021

IRRIGATION system diagram.

56N



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



State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9476

DOMESTIC system diagram.

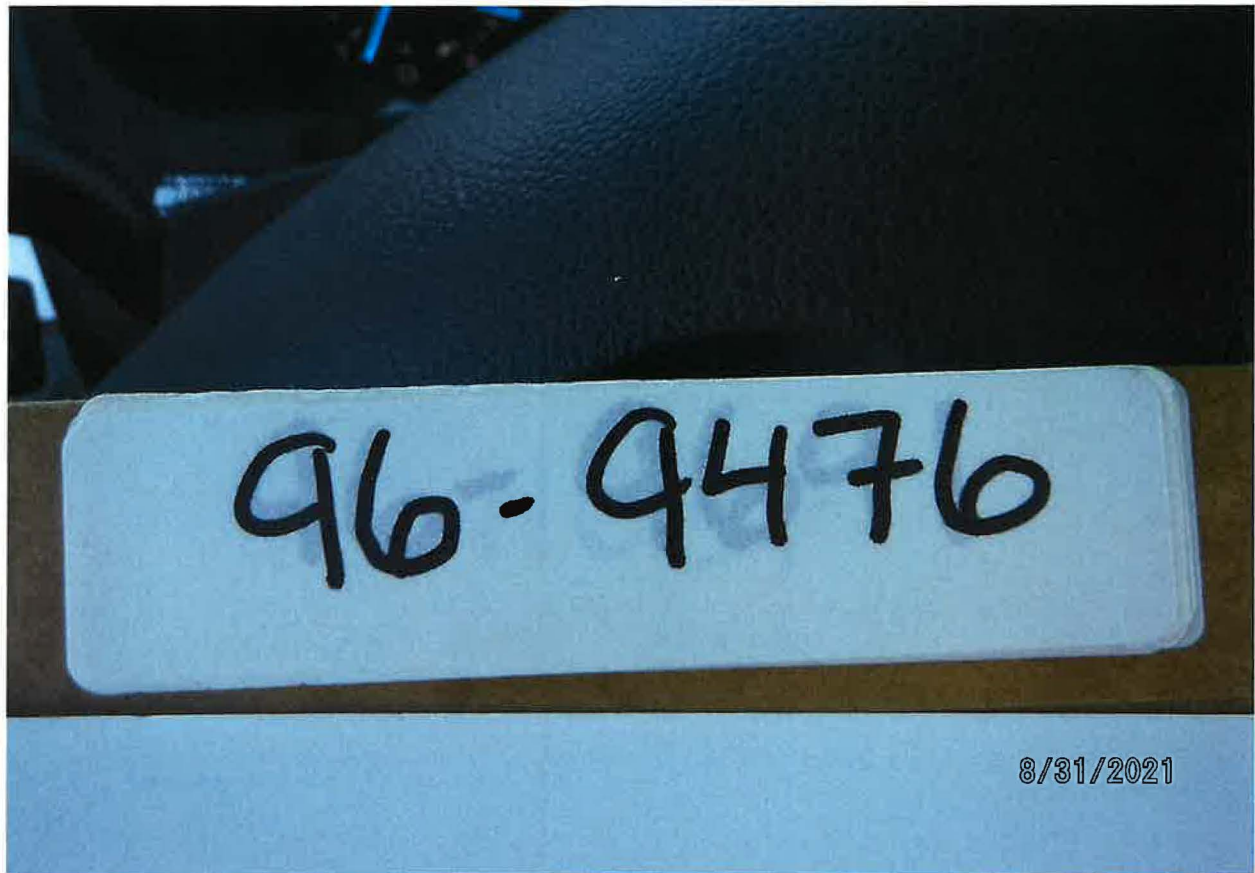
03W



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

0 0.035 0.07 0.14 Miles





FIELD EXAM DATE 8/31/2021



POD – GROUNDWATER WELL D0053639



WELL D-TAG D0053639



PUMP STATION STRUCTURE



INTERIOR PUMP STATION – SMALL PRESSURE POT



1.5 HP, 3-PHASE PUMP MOTOR INSTALLED IN SYSTEM



DOMESTIC POU



IRRIGATION FROM HOSE BIB(S) ON HOME



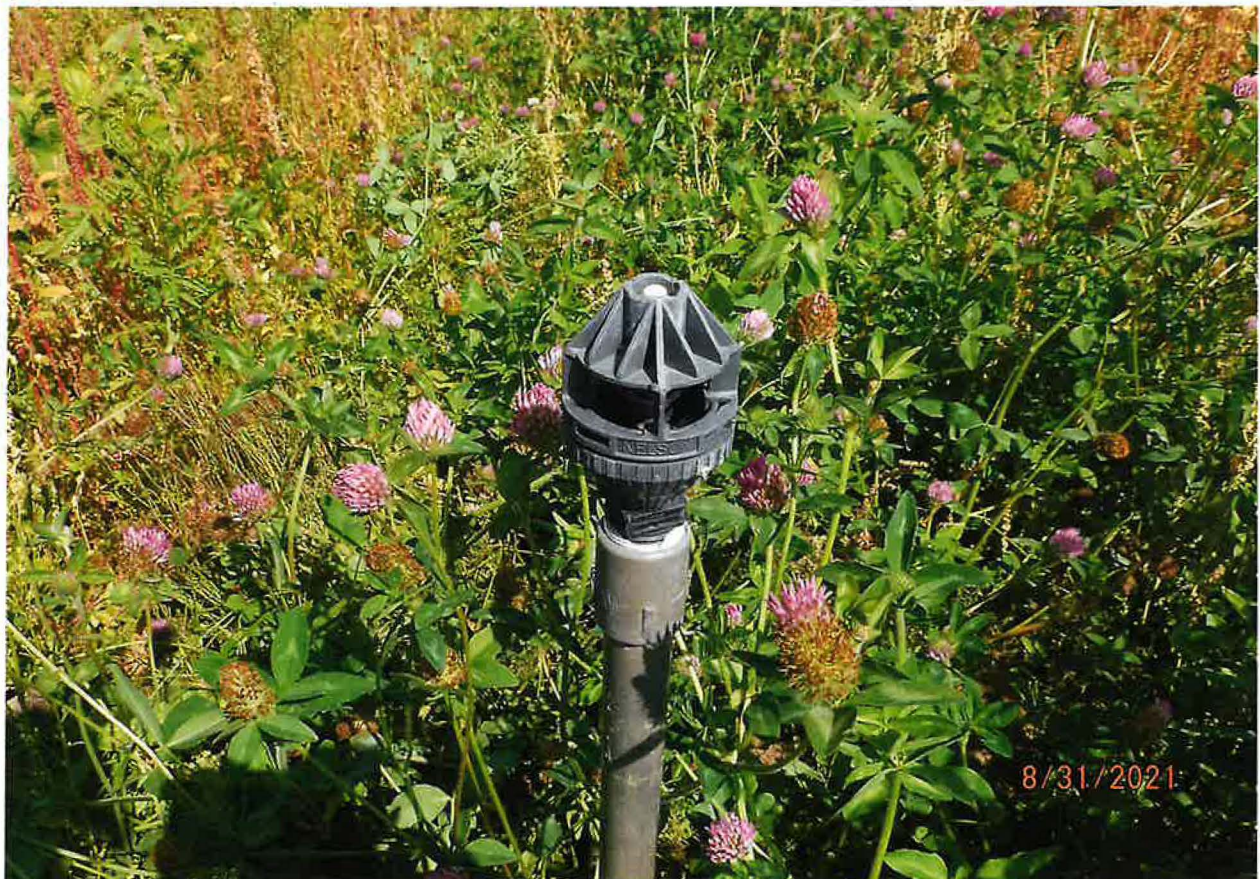
IRRIGATION POU – FENCED IN GARDEN



SPRINKLER SYSTEM MAIN LINE



IRRIGATION POU – MULTIPLE 2" OR 3" HAND LINES TO SPRINKLER SYSTEM



NELSON MODEL R2000 SPRINKLERS ATTACHED TO IRRIGATION RISER PIPES IN GARDEN AREA



IRRIGATION POU





IRRIGATION POU – NEAR RESIDENCE





IRRIGATION POU



IRRIGATION POU – FROST FREE HYDRANT TO HOSE AND TRIPOD SPRINKLERS



IRRIGATION POU



Maxey, Shaun

From: James Johnson <Jrjohnson@montereybay.com>
Sent: Thursday, May 6, 2021 11:00 AM
To: Maxey, Shaun
Subject: Permit No. 96-09476



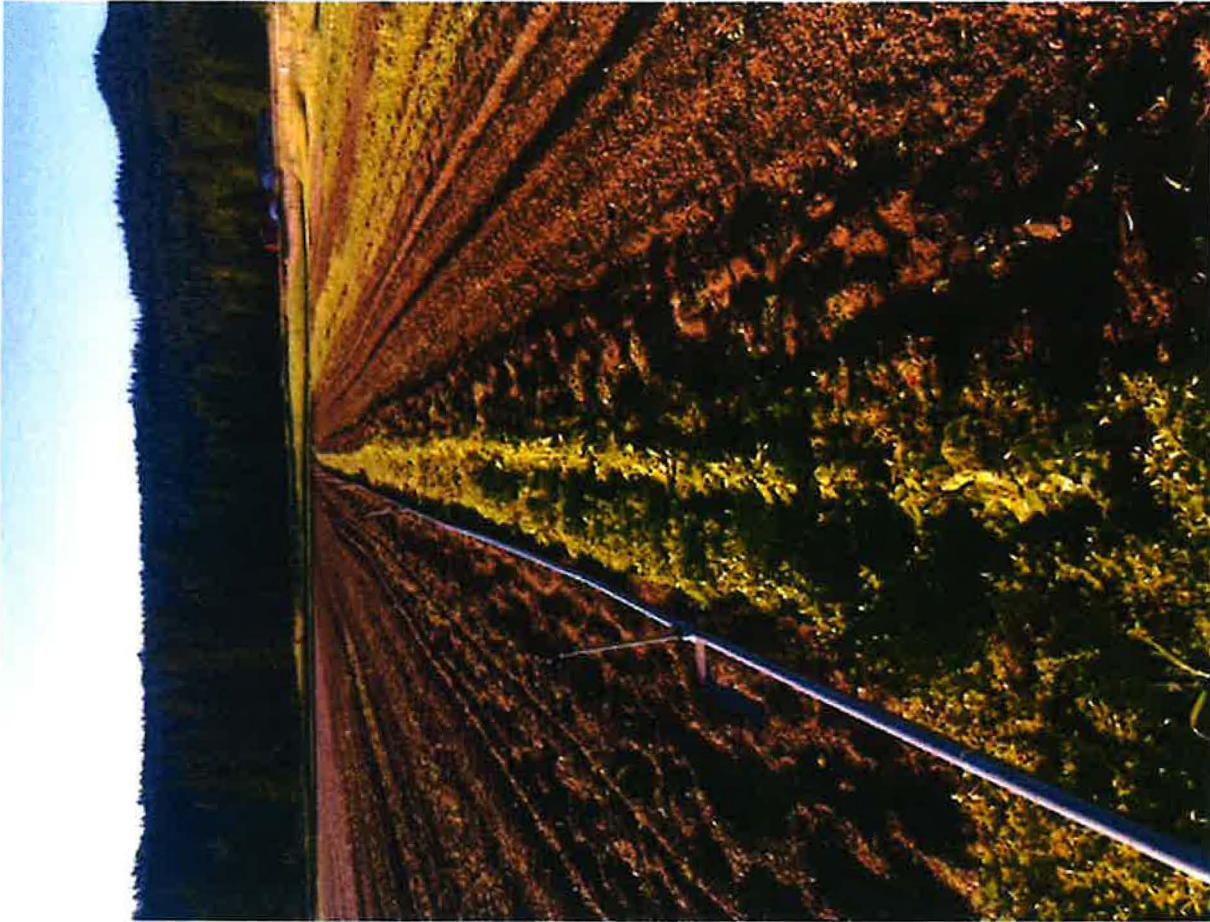
Sent from my iPhone

SALE SPRINKERS IRRIGATE 40 feet on each side of
Line

James R. Johnson

Maxey, Shaun

From: James Johnson <Jrjohnson@montereybay.com>
Sent: Thursday, May 6, 2021 11:28 AM
To: Maxey, Shaun
Subject: Permit No. 96-9476-3

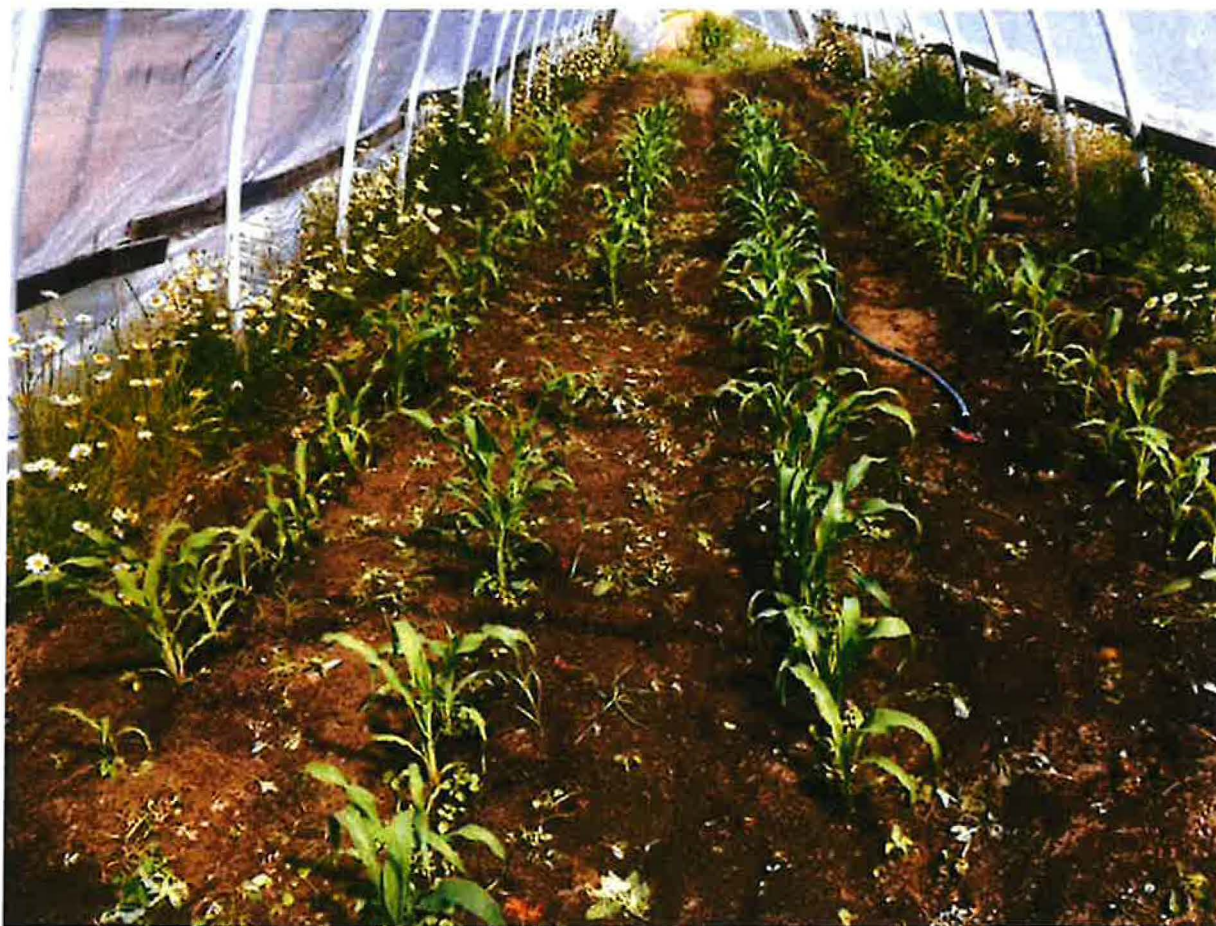


Sent from my iPhone

short sprinkler Irrigate 40 feet on each side
of line.

Maxey, Shaun

From: James Johnson <Jrjohnson@montereybay.com>
Sent: Thursday, May 6, 2021 11:20 AM
To: Maxey, Shaun
Subject: Permit No. 96-9476-1



Sent from my iPhone

Three ~~two~~ frost free installed inside of GARDEN AND HOSE SERVICES
Hoop house.

James R. Johnson

Maxey, Shaun

From: James Johnson <Jrjohnson@montereybay.com>
Sent: Friday, May 7, 2021 1:59 PM
To: Maxey, Shaun
Subject: Permit No. 96-09476 wellhead frost free's



Sent from my iPhone

Wellhead + wellhouse
2 Frost Free's
House in back of property

Maxey, Shaun

From: James Johnson <Jrjohnson@montereybay.com>
Sent: Thursday, May 6, 2021 11:43 AM
To: Maxey, Shaun
Subject: Tomatoes



Sent from my iPhone

Maxey, Shaun

From: James Johnson <Jrjohnson@montereybay.com>
Sent: Thursday, May 6, 2021 11:44 AM
To: Maxey, Shaun
Subject: Tomatoes



Sent from my iPhone