

Michael D. McLachlan (State Bar No. 181705)  
**LAW OFFICES OF MICHAEL D. McLACHLAN, APC**  
44 Hermosa Avenue  
Hermosa Beach, California 90254  
Telephone: (310) 954-8270  
Facsimile: (310) 954-8271  
*mike@mclachlan-law.com*

Daniel M. O'Leary (State Bar No. 175128)  
**LAW OFFICE OF DANIEL M. O'LEARY**  
2300 Westwood Boulevard, Suite 105  
Los Angeles, California 90064  
Telephone: (310) 481-2020  
Facsimile: (310) 481-0049  
*dan@danolearylaw.com*

Attorneys for Plaintiff Richard Wood and the Class

**SUPERIOR COURT FOR THE STATE OF CALIFORNIA**  
**COUNTY OF LOS ANGELES**

Coordination Proceeding  
Special Title (Rule 1550(b))

ANTELOPE VALLEY GROUNDWATER  
CASES

RICHARD A. WOOD, an individual, on  
behalf of himself and all others similarly  
situated,

Plaintiff,

v.

LOS ANGELES COUNTY  
WATERWORKS DISTRICT NO. 40; et  
al.

Defendants.

Judicial Council Coordination  
Proceeding No. 4408  
(Honorable Jack Komar)

Lead Case No. BC 325201

Case No.: BC 391869

**DECLARATION OF RICHARD A.  
WOOD IN SUPPORT OF MOTION  
FOR AWARD OF ATTORNEYS'  
FEES, COSTS AND INCENTIVE  
AWARD**

Location: Dept. TBA  
Santa Clara Superior Court  
191 N. First Street  
San Jose, California  
Date: March 21, 2016  
Time: 1:30 p.m.

1                                   **DECLARATION OF RICHARD A. WOOD**

2 I, Richard A. Wood, declare:

3           1.       I make this declaration of my own personal knowledge, except where  
4 stated on information and belief, and if called to testify in Court on these matters,  
5 I could do so competently.

6           2.       I am the Court-appointed class representative and the Plaintiff in  
7 this action. I make this declaration in support of the joint motion for preliminary  
8 approval of the settlement agreement.

9                                   **TIME SPENT**

10          3.       Over the past seven years, I have spent approximately 2200 hours in  
11 my role as Plaintiff and class representative. The following estimates are  
12 conservative, and I have rounded down wherever necessary.

13                   a.       *Court Hearings.* I have attended Court on this matter on  
14 more than 50 days, with an average door to door round trip travel time of  
15 at least eight hours, for a total of 400 hours.

16                   b.       *Courtcall.* I have attended 78 telephonic appearances, which  
17 vary widely in length, but on average have been at least 45 minutes in length. The  
18 total here is 39.75 hours.

19                   c.       *Mediation with Justice Robie.* I spent 48 hours driving to  
20 Sacramento four round trips for mediation sessions covering seven days. Those  
21 mediation sessions covered 42 hours of my time. The total here is 90 hours.

22                   d.       *General Lawsuit Work Time.* I have spent an average of five  
23 hours per week on a variety of case-related activities, including: reviewing case  
24 filings on line; phone calls with my attorneys, small pumper class members, or  
25 other parties; emailing with my attorneys and reviewing documents; attending at  
26 least twenty mediation sessions, including those with Mr. Dendy, Mr. Waldo and  
27 later mediation sessions; attending local town hall and other non-mediation  
28

1 meetings about this lawsuit; preparing and providing relevant information for my  
2 attorneys. This five hour per week estimate is likely a bit low, as there have been  
3 many weeks where that number has been much higher, sometimes in excess of  
4 twenty or more hours. Rounding down to just over six years, the total estimate of  
5 my time on this lawsuit is at least 1820 hours.

#### 6 **OUT OF POCKET EXPENSES**

7 4. My total out of pocket costs are approximately \$9,837. I have driven  
8 7040 miles on this case. At 30 miles per gallon, and using a conservative price of  
9 \$3.00 per gallon, I estimate my fuel costs at \$704.

10 5. The 78 CourtCall appearances have cost me \$6,359, plus another  
11 \$1,025 in filing fees. During my four trips to Sacramento for the Robie meetings,  
12 I incurred \$1,479 for hotel costs, plus actual fuel costs of \$270 (not included  
13 above).

#### 14 **INCENTIVE AWARD AND WATER USE**

15 6. I would prefer to receive as incentive payment the right to pump an  
16 additional two acre-feet of groundwater for use on my property, free of  
17 assessment, in lieu of the traditional monetary incentive payment if the Court  
18 feels that is appropriate.

19 7. I have lived in the Antelope Valley since 1969, and have resided at  
20 45763 North 90<sup>th</sup> Street East, Lancaster, California since 1972. On September 30,  
21 1983, I took fee title to this ten-acre parcel and have owned continually since that  
22 date. As long as I have resided on the property, it has contained the same single  
23 family residence, which was built many years before I purchased it.

24 8. For the entire time this property has been a residence, it has been  
25 serviced by a groundwater well. To my knowledge, there has never been  
26 municipal water service to this property, and certainly none during my  
27 ownership. My property is not part of any mutual water company.

1           9.     During my residence on the property, my water usage has been  
2 solely for domestic purposes. All of this water is pumped from a well I maintain  
3 on my property, and all of it is used on the property.

4           10.    I am an engineer by education and profession. I have both a  
5 Bachelor of Science and Master of Science degree in engineering. I spent the first  
6 29 years of my career as a test engineer at the Air Force Fight Test Center,  
7 Edwards AFB, with extensive experience in test methods, test instrumentation,  
8 and statistical data analysis. The last four years of my career, I was the Director  
9 of Environmental Management at Edwards AFB with involvement, among many  
10 other things, in the base's water supply and quality.

11          11.    I have considerable experience with groundwater extraction and use,  
12 particularly for residential purposes. I have closely tracked my water use over the  
13 years using rough but fairly simple calculations for water production very similar  
14 to the work done by Mr. Thompson in this case in assessing Small Pumper Class  
15 production. Year to year, my production varies, on average from 3.5 to about 5.0  
16 acre feet per year. In very dry years, I slightly exceed 5 afy, for reasons noted  
17 below.

18          12.    A large number of the Small Pumper Class member's properties are  
19 located in the unincorporated areas of Los Angeles and Kern counties. As such  
20 many are on large lots of 10-20 acres as a result of the Counties' zoning and  
21 minimum lot size rules. This results in houses being spread apart by 1/8 mile,  
22 1/4 mile, 1/2 mile, and more. In my case, my house is sitting alone in open  
23 desert, with no adjacent neighbors for quite some distance. Attached as **Exhibit**  
24 **11** are true and correct copies of three Google Maps images of my property and  
25 the surrounding area, both aerial and at street level.

26          13.    The Mojave Desert provides no tall vegetation to protect houses  
27 from the prevailing 10 to 30 MPH (and sometimes as high as 40 MPH) winds  
28 that blow almost daily in the Antelope Valley. Unlike the houses in the urban

1 areas that have other buildings and neighbors trees to collectively form a wind  
2 break, many Small Pumper Class properties must provide their own protection  
3 from the wind (and dust) that blow across the Valley on a daily basis. Attached as  
4 **Exhibit 12**, are, in this order, true and correct copies of Google Maps images of a  
5 typical Mutual Water Company area in the Antelope Valley and a typical urban  
6 area in Lancaster.

7 14. Wind breaks keep the houses cooler in summer, warmer in winter  
8 (saving utility costs), and provide shelter from the blowing dust. Attached as  
9 **Exhibit 13** are true and correct copies of published materials from Iowa State  
10 University and windbreaks.com that address the advantages of wind breaks.

11 15. A major water use at my property is to maintain the wind break  
12 trees. There is relatively little water use in the winter as the trees are dormant.  
13 The majority of the water use is in the summer. The vegetation is NOT watered  
14 on a regular schedule. The trees are watered on an as-needed basis. The water  
15 use varies depending on a variety of factors: (1) did the Antelope Valley receive a  
16 good "El Nino" rain fall in the spring or not; (2) did the Valley receive substantial  
17 rain fall as the result of thunder storms in August and September or not; and (3)  
18 how, hot, dry and windy was the weather during summer months. The above  
19 parameters affect evapotranspiration. In other words, the hotter, drier, or  
20 windier the summer is, the more water the plants (primarily trees) give up to the  
21 atmosphere.

22 16. In a very dry year the watering may begin in early March. In a wet  
23 spring the watering may not begin until sometime in April. During the summer  
24 months if it is relatively cool watering occurs about every third week. If it is  
25 relatively hot watering occurs every second week. If several substantial thunder  
26 storms occur in August and /or September watering may be delayed a week or  
27 two.

1           17. To illustrate the variation in water use from year to year both  
2 Southern California Edison and Mr. Timothy Thompson conducted estimates and  
3 tests to determine annual water use. Mr. Thompson estimated 3.11 afy and 3.51  
4 afy for 2011 and 2012 respectively. Southern California Edison estimated 4.3 afy  
5 for the period of July 2014 through June 2015. It should be noted 2014 and 2015  
6 were very dry years in the Antelope Valley along with the general draught  
7 affecting all of California. Using SCE Meter Data from April 2007 through March  
8 2008 and the measured flow rate from the Edison tests I used 6.3 AF for that 12  
9 month period.

10           18. I have since become much more conscious of being more efficient in  
11 my water use. However, water use will vary from year to year depending on  
12 weather conditions.

13           19. Five acre-feet of water will NOT be used every year; but it could be  
14 necessary in particularly hot, dry, windy years.

### 15                                   **THE SETTLEMENT TERMS**

16           20. I do not know exactly how many settlement meetings I have  
17 attended, or how many hours of time I have spent discussing that with my  
18 attorneys, but it is many hundreds of hours (likely more than 500 hours, at least).  
19 An incredible amount of time and effort went into the Small Pumper Class  
20 Settlement. While human nature always tends to have us want a better deal, I  
21 feel that the terms of the settlement are as good as we could have hoped for in the  
22 given circumstances. I believe my counsel fought very hard for all of the  
23 important provisions the Small Pumpers needed, and nearly all of those are  
24 reflected in the final judgment. It is absolutely critical that we have a stable,  
25 long-term groundwater supply to maintain our way of living because there is no  
26 other viable option for domestic water supply. I am confident that the judgment  
27 protects the Class Members' interests very well, in perpetuity. For these reasons,  
28 I am pleased with the outcome.

1 I declare under penalty of perjury under the laws of the State of California  
2 that the foregoing is true and correct. Executed this 26<sup>th</sup> day of January 2016, at  
3 Lancaster, California.

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6 Richard A. Wood  
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## **Exhibit 11**



Google Maps



Imagery ©2016 DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2016 Google

500 ft



Google Maps



Imagery ©2016 DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2016 Google

100 ft



Google Maps 45540 90th St E

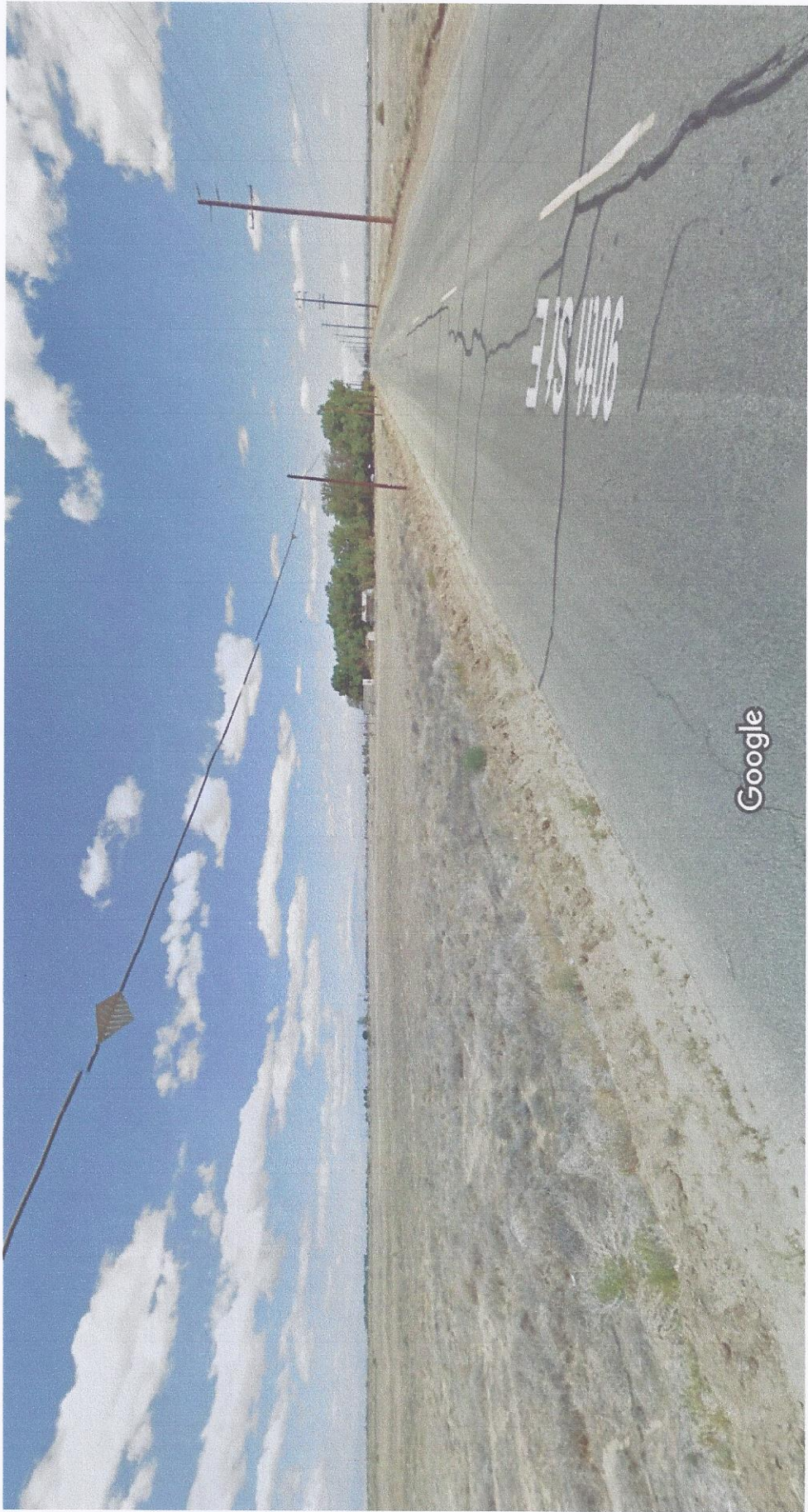


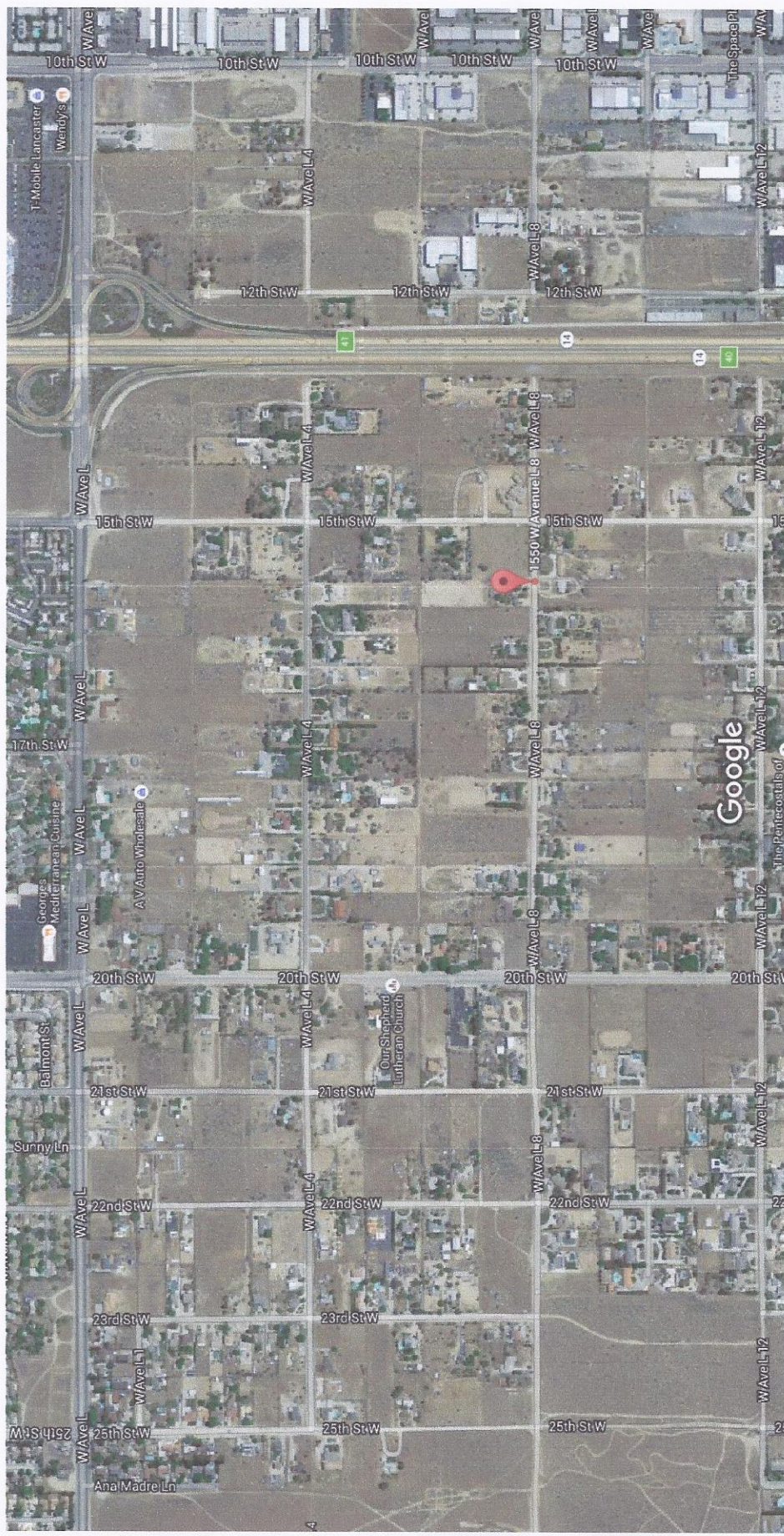
Image capture: May 2012 © 2016 Google

Lancaster, California  
Street View - May 2012

## **Exhibit 12**



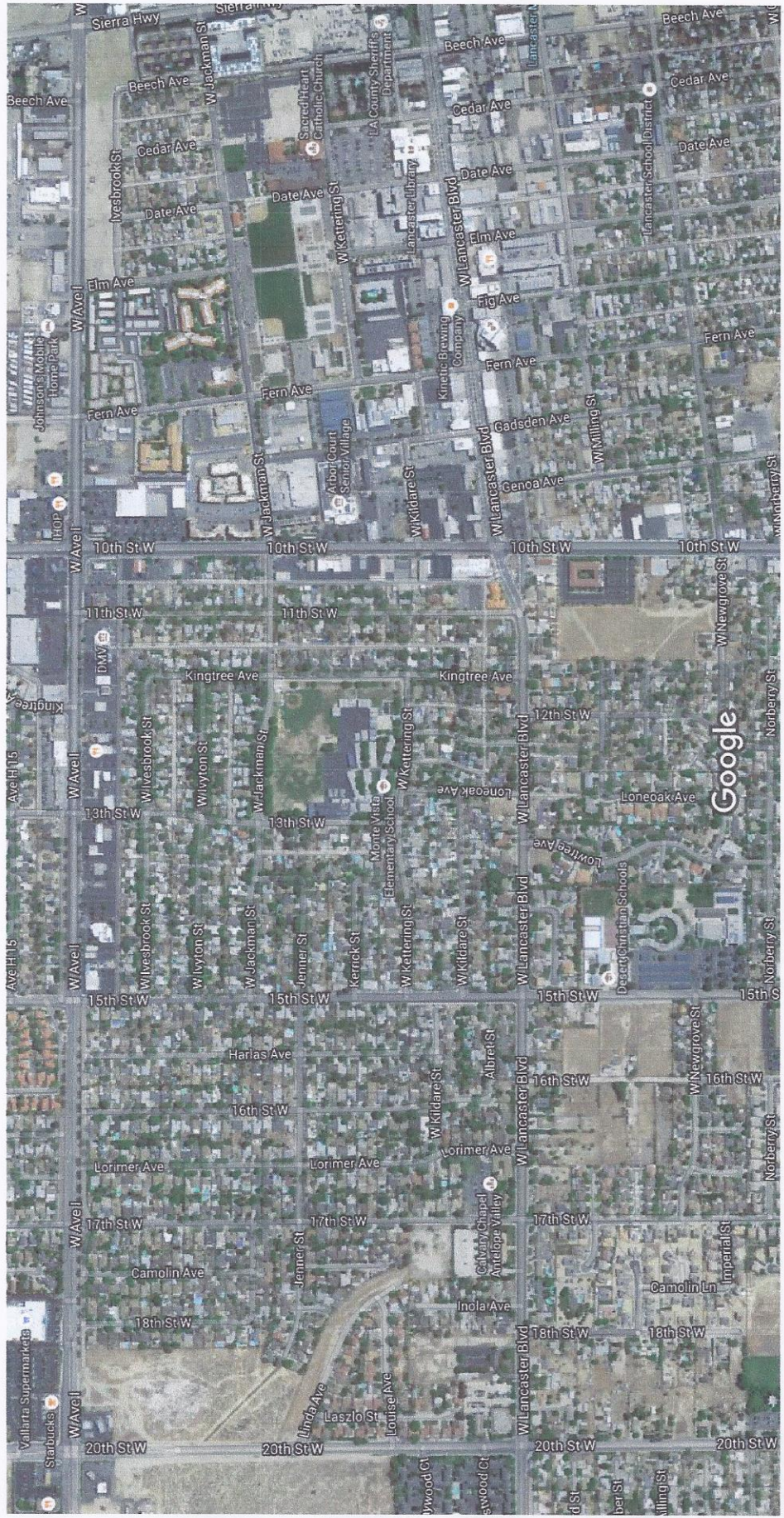
# Google Maps 1550 W Ave L 8



Imagery ©2016 DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2016 Google



Google Maps 1550 W Ave L 8

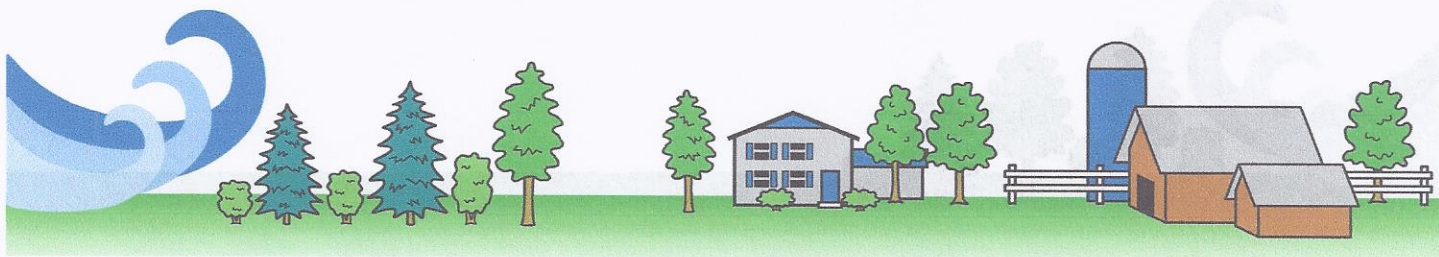


Imagery ©2016 DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2016 Google

500 ft

## **Exhibit 13**





## Farmstead Windbreaks: Planning

Much of Iowa's land is relatively level to gently rolling with few trees to block the prevailing winter winds. Windbreaks—rows of trees and shrubs properly located—can slow, direct, and block these winter winds, resulting in many benefits to the landowner. A windbreak is a permanent part of the farm landscape, so think and plan carefully before planting trees or shrubs.

### Benefits of windbreaks

A good farmstead windbreak adds thousands of dollars to property values and provides many benefits. Some benefits such as energy conservation and snow control are the result of wind speed reduction. Other benefits such as wildlife habitat and aesthetic value are the result of having trees and shrubs in the landscape.

### Reduced wind speed

Windbreaks direct winds over or around protected areas. This reduction in wind speed results in many benefits. The amount of wind speed reduction and the area affected depend on the height, density, width, and shape of the windbreak. The continuity of the windbreak is important. Holes or gaps in the windbreak may result in increased wind speed and reduced protection.

Windbreak **height** (H) is the most important factor used to determine the distance downwind that is protected by a windbreak. Wind speed is reduced most nearest the windbreak; at distances of 25 to 30 times H wind speed is reduced less than 10 percent (table 1). In addition there is a small reduction in wind speed up to one to four times H on the upwind side of a windbreak (figure 1).

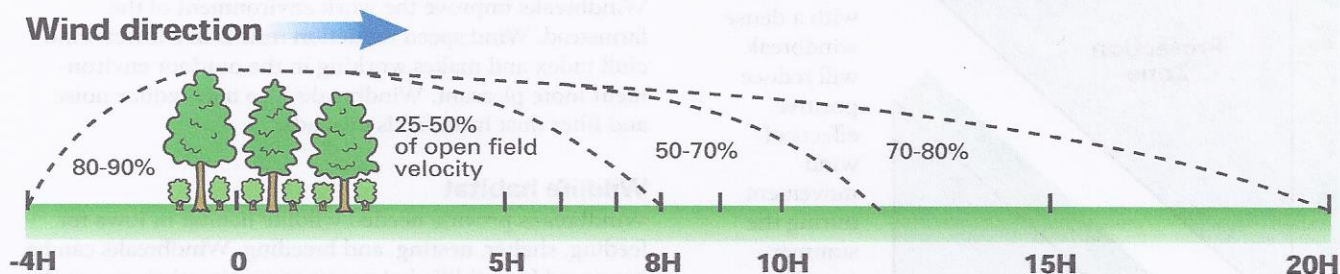


Figure 1. Zones of reduced wind velocity downwind of barrier as percentage of open field velocity. Vertical scale exaggerated.

Table 1. Wind speed reductions on the downwind side of a moderately dense windbreak

#### Distance from windbreak

5H	10H	15H	20H	25H	30H
78%	66%	35%	14%	10%	4%

#### % reduction in wind speed

The taller the windbreak, the greater the zone of protection. The percent of reduction in wind speed is relatively constant and is mostly independent of wind velocity.

The **density** of a windbreak also affects the reduction of wind speed. Density is the ratio of the solid portion of a windbreak to the total area of the barrier. Very dense windbreaks reduce wind speed in the zero to 10H zone more than do less dense windbreaks. Moderately dense windbreaks reduce wind speed over a greater H number than very dense windbreaks. A windbreak density of 55 to 85 percent provides the greatest combination of benefits. For some specialty functions such as snow capture, a density of 30 to 40 percent may be ideal.

IOWA STATE UNIVERSITY  
University Extension

Ames, Iowa

Pm-1716 | August 1997





*Ryan and Lana Reed from Ottumwa, Iowa on their 2012 Pork Industry Environmental Stewards award. We helped with the design and provided the trees for this project. Ryan and Lana did all the planting and weed control. Read the story and see the video on our [Livestock Buildings](#) page.*

### **Introduction**

*Growing up in the windswept plains of Iowa I saw the effects of wind and how a row or several rows of trees completely changed the environment that we lived in, especially in the winter, but also at other times of the year.*

*We have been growing and planting windbreaks in the Midwest for over 40 years and believe we have the knowledge to provide you with the best windbreak trees that will survive in your area.*

*Many times people will sell any kind of evergreen and call it a windbreak, but after a few years the tree does poorly or does not survive at all.*

*We are here to provide you with the knowledge that comes with over 40 years of work in this area, when you are ready to plant a windbreak, we are here to help you get it done and done right.*

### **BENEFITS OF A WINDBREAK**

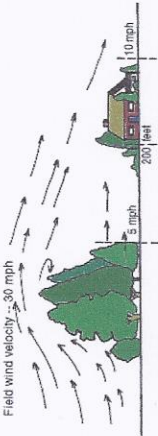
- 1. To protect the people and animals from cold winter winds by reducing wind velocities by-up-to 90%.
- 2. Prevent large amounts of snow from drifting by catching it inside and directly behind the windbreak and melting it slowly as it soaks into the ground and does not run off.
- 3. Reduces the costs of heating and cooling your home by 25% or more by reducing wind velocity.
- 4. Protect the home, business, or farm buildings from windstorms that can come at any time of the year.
- 5. Reduce traffic dust and other noises from nearby roads and fields.
- 6. Reduce the effects of hot drying summer winds, the trees act like air conditioners as they transpire and have a cooling effect on the immediate area.
- 7. Provides a better working and living condition with more productivity for persons inside the windbreak as a result of reduced winter winds.
- 8. Will attract game and songbirds and other wildlife all times of the year, especially in the winter.
- 9. Will help beautify the overall landscape around the area and make it a better place to work and play along with an increase in the total value of the windbreak protected area.
- 10. Protects growing plants and trees by lowering evaporation rates resulting in an increase in growth and plant quality.

Proper design of your windbreak must be carefully considered. Negative effects of poorly placed or improper trees can be eliminated by proper forethought. They must be able to withstand extreme cold, strong winds, poor soils and periods of drought. Not many trees are able to grow well under these conditions, so we encourage you to contact us, for our experience in this field is extensive and we do serve the entire United States.

WIND CHILL CHART

		Temperature (°F)																						
		40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45					
Wind (mph)	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63					
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72					
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77					
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81					
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84					
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87					
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89					
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91					
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93					
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-59	-66	-73	-80	-87	-94					
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97					
	60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98					

Wind chill temperature is defined as that temperature in calm air which provides the same chilling effect on a person as that for a particular combination of temperature and wind. The chart below allows you to estimate the wind chill temperature for a variety of temperature and wind speeds. For example, if the temperature is 10° F and wind speed 25 MPH do the following: 1) find 10° F on the top row, 2) read down to the row with 25 MPH, and 3) read the number in the intersection. In this example, the figure is -11° F.



As the old saying goes its not the cold, it's the wind that effects us the most. The reduction of wind velocity makes living for ourselves, our animals and anything else, inside this protected area a much more pleasant experience.