

# RPS Water Assurance Plan™

*Our time-tested process ensures you have the right pump, parts, and tools for a fast and easy install.*

1

## Ensure Solar Pumping is the Right Choice for Your Site

*Solar pumps are only the best option if you have..*

- a. Well casing diameter of 3" or more
- b. Good southern exposure for solar panels near water source (within 500 feet of the well)

2

## Determine Pump Size with Online Algorithm

- Estimate rough daily water usage in gallons
- Estimate depth to water in well, additional vertical rise, height of tank, horizontal distance
- Takes an average of 2 minutes to complete [sizing form](#)

[START NOW](#)

or CALL

888-637-4493

3

## Project Review & Installation Overview

- Chat with the famously helpful RPS team
- Review sizing calculations and equipment checklists
- Confirm pump sizing, available options, common questions, installation

CALL

888-637-4493

4

## Choose Delivery Timing & Order Pump

- Standard Ground Shipping is free and includes insurance to protect your investment
- Expedited shipping available when needed
- 30 Day Money-back Water Guarantee

CALL

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# RPS Water Assurance Plan™ Outline

This step-by-step process ensures you get the right pump, parts, and tools for a fast and easy install.

- 1** A few requirements that we need to ask first...  
 If you're pumping from a well, is your well casing larger than 3.5" ?  
 Do you have good southern exposure for solar panels near the well or water source? (within 500ft ideal)

- 2** From:  Well  Pond  Spring  Tank  Not Drilled  Other  
 Into:  Stock Tank  Holding Tank  Pond  Pressure tank  Other Notes:  
 Hauling Water: Paying Someone Personally Other: \_\_\_\_\_ Cost: \$ \_\_\_\_\_ Mileage: \_\_\_\_\_ Frequency: \_\_\_\_\_  
 Repairing Windmills: Every \_\_\_\_\_ Weeks, Running Generator: Every \_\_\_\_\_ days, Paying Electric Bill: \$ \_\_\_\_\_ /month  
 Considering other options: \_\_\_\_\_ Cost: \_\_\_\_\_  
 Timeline? \_\_\_\_\_ Notes:

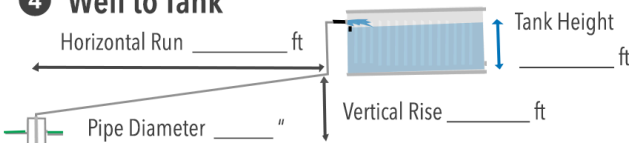
## 3 Water Usage

Usage: Cattle Animals Humans Plants  
 Water Needed per day: \_\_\_\_\_ Gallons  
 LIVESTOCK  
 Number of Head: \_\_\_\_\_ Head

Customer Name: \_\_\_\_\_  
 City / State: \_\_\_\_\_  
 Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
 Engineer: \_\_\_\_\_  
 GPD: \_\_\_\_\_ gallons TDH: \_\_\_\_\_ ft  
 Pump Selected: RPS \_\_\_\_\_

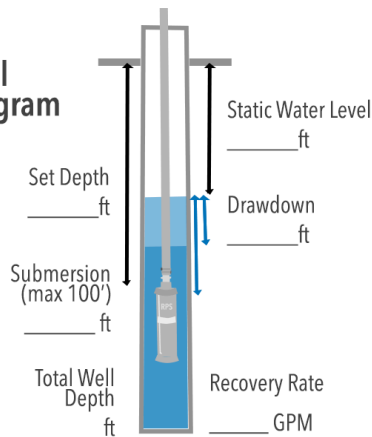


## 4 Well to Tank



Type: Pressure Stock Tank Storage Pond  
 Total Storage: \_\_\_\_\_ gallons  
 Shutoff: 2-Wire Sensor Pressure Switch/Mech. Float

## 5 Well Diagram



## 7 Head Calculations

Static Water Level + Vertical Rise + Frictional Loss  
 Total Head (TDH) \_\_\_\_\_ ft  
 INTO PRESSURE (if using pressure switch shutoff)  
 Static + Rise + Frictional Loss + Pressure (1psi=2.31ft)  
 Total Head (TDH) \_\_\_\_\_ ft

## 6 Downhole Pump Plumbing

Outlet Female Pipe Thread (NPT): 1/2" 3/4" 1" 1-1/4"  
 Pipe Size: 3/4" 1" 1-1/4" +Check Valve  
 Pipe Material: Steel PVC Black poly (recommended)

Frictional head loss over distance of poly pipe\*

Length	Diameter				
	1/2"	3/4"	1"	1 1/4"	1 1/2"
100'	20'	5'	1.7'	0.5'	negligible
500'	NR	27'	8.5'	2.3'	1.1'
1,000'	NR	54'	17'	4.6'	2.2'

The amount of total pump head (shown in feet) increases due to friction over long horizontal distances of poly pipe depending on the diameter of the pipe. Smaller diameter pipe adds more head to the system.

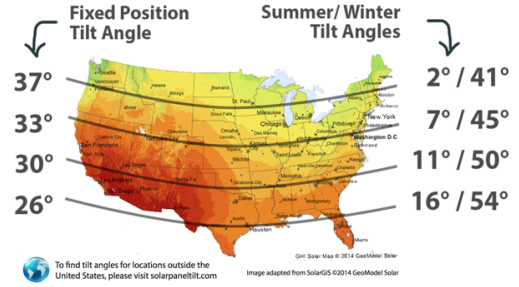
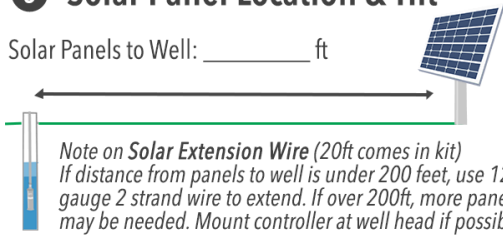
\*Calculated using an average flow of 5 GPM at 70°F  
 NR = not recommended

## 8 Well Head Plumbing

Casing: Steel PVC 4" 5" 6" 8" Other \_\_\_\_\_  
 Additional: Nipple Coupler Elbow Tee  
 FREEZE PLAN: Pitless/Trenching Drain-Back Seasonal

## 9 Solar Panel Location & Tilt

Solar Panels to Well: \_\_\_\_\_ ft



## 10 TURNKEY Shopping List

- \_\_\_\_ 8-10ft 2" Sch40 Pipe (For each 2 Panel Mount)
- \_\_\_\_ 8-10ft 4" Sch40 Pipe (For each 4 Panel)
- \_\_\_\_ Bags Concrete

**TURNKEY SIZING**  
 Length: 100ft 200ft 300ft  
 Pipe: 3/4" 1"  
 Casing Diameter: 4" 5" 6" 8"  
 Mounting: \_\_\_\_ 2 Panel \_\_\_\_ 4 Panel

## OR... DIY Shopping List

Item	Amt.	On Site	Local Store	Online	RPS
Poly Rope 1/4" 3/8"	_____ ft	_____	_____	_____	_____
Drop Wire 12-3 10-3 12-4	_____ ft	_____	_____	_____	_____
Drop Pipe 3/4" 1" 1-1/4"	_____ ft	_____	_____	_____	_____
Sensor Wire (if needed) 18-2 20-2	_____ ft	_____	_____	_____	_____
Solar Extension Wire (if 20' is not enough) 12-2	_____ ft	_____	_____	_____	_____
_____ Well Seal, _____ Barbs, _____ Nipple, _____ Coupling, _____ Elbow, _____ Tee, _____ Other					
Solar Panel Mounting _____ 100w (~26"x39" Frames)	_____	_____	_____	_____	_____
_____ Array dimensions (rough)					
Controller Mounting _____ Piece of Plywood (at least 16" x 10")	_____	_____	_____	_____	_____
_____ U bolts or other to fasten plywood					
Grounding _____ Copper Grounding rod _____ Grounding wire _____ Grounding Clamp (attach wire to rod)	_____	_____	_____	_____	_____
Other Items: _____ Teflon tape _____ Electrical tape					

## 11 Tools & Equipment to Bring

- \_\_\_\_ Wire stripper/crimper
- \_\_\_\_ Heat gun, torch or lighter for heat-shrink sleeves
- \_\_\_\_ Screwdrivers (flat and Phillips head)
- \_\_\_\_ Multimeter (highly recommended)
- \_\_\_\_ Two adjustable wrenches
- \_\_\_\_ Bucket with water for testing the system before dropping

*For 100ft+ Poly Pipe installs, extra set of hands to help lower pump is recommended.  
PVC or Steel Pipe installations, more people and a boom truck is recommended to hold pipe in place.*

## 12 RPS Water Assurance Completed

*Great work! You've got the right solar pump system selected now and we've made sure you'll have what you need with you to install. We'll send along this completed worksheet in the box with your system for additional reference. This is exciting. A new era for you getting the sun to haul water for you. Most customers tell us they are kicking themselves for not finding our pumps sooner, with how much time and money they have saved - time that can be spent with family, friends, fishing and whatever. Call us up and we'll get a pump system coming your way today!*

