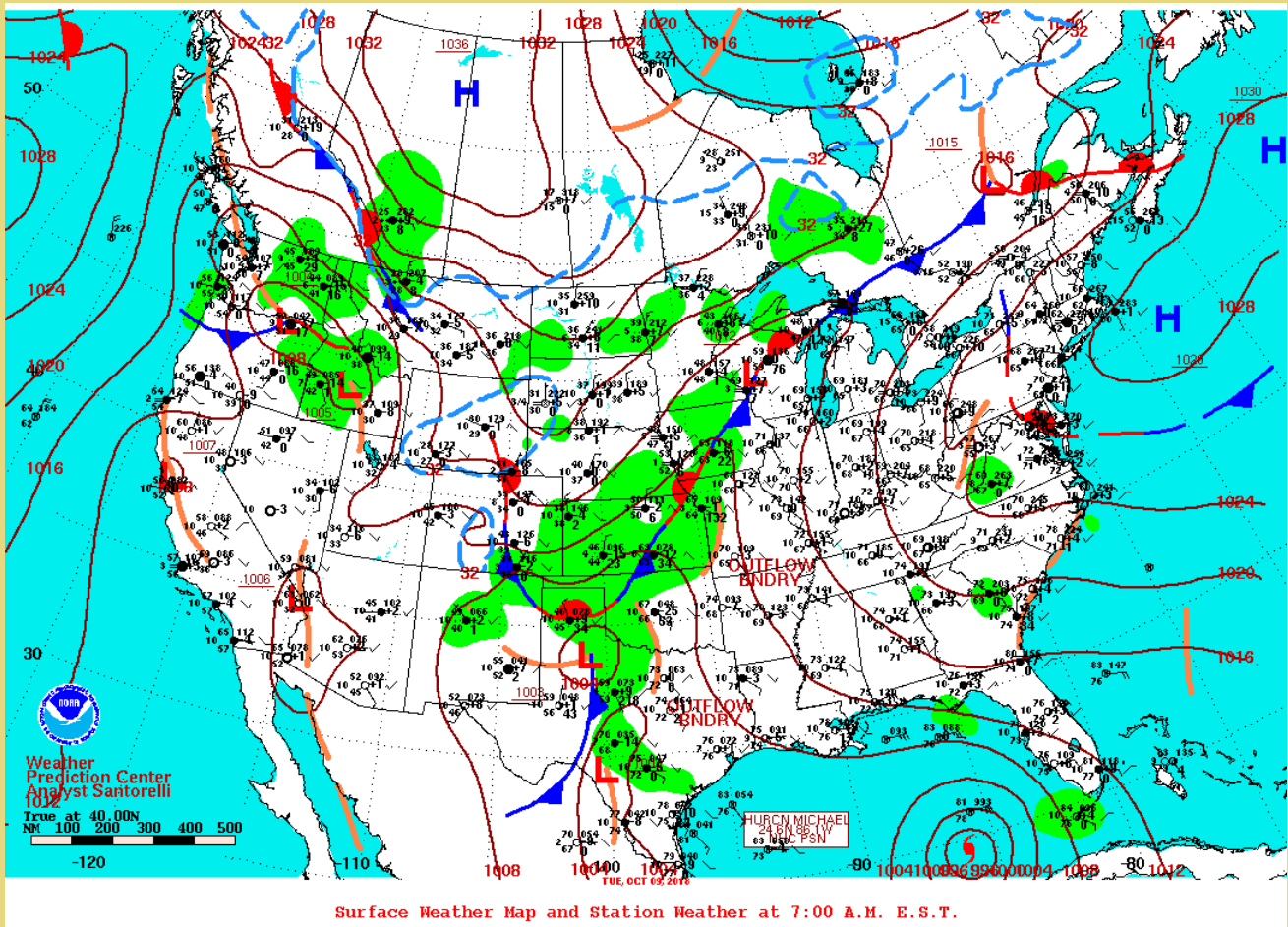


Climate data for Volos

\	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<b>Average high °C</b>	11,1	12,3	14,3	18,8	24,0	29,0	31,0	30,7	27,0	21,6	16,8	12,6	20,8
<b>(°F)</b>	52,0	54,1	57,7	65,8	75,2	84,2	87,8	87,3	80,6	70,9	62,2	54,7	69,4
<b>Daily mean °C</b>	6,6	7,6	9,9	14,1	19,5	24,5	26,8	26,1	22,2	16,9	12,1	8,2	16,2
<b>(°F)</b>	43,9	45,7	49,8	57,4	67,1	76,1	80,2	79,0	72,0	62,4	53,8	46,8	61,2
<b>Average low °C (°F)</b>	2,8	3,4	4,8	7,7	12,1	16,3	18,6	18,5	15,7	12,1	8,2	4,5	10,4
	37,0	38,1	40,6	45,9	53,8	61,3	65,5	65,3	60,3	53,8	46,8	40,1	50,7
<b>Precipitati</b>													
<b>on mm</b>	49,0	46,9	53,3	35,8	36,8	22,1	17,4	15,9	35,6	63,1	63,6	60,5	500,0
<b>(inches)</b>	1,9	1,8	2,1	1,4	1,4	0,9	0,7	0,6	1,4	2,5	2,5	2,4	19,7
<b>Avg, precipitati on days</b>	12,3	10,2	8,1	6,5	4,6	3,6	2,0	2,2	3,6	7,3	8,4	11,4	80,2
<b>% humidity</b>	74,8	73,3	73,2	68,7	63,5	53,7	50,7	52,8	60,0	68,8	74,9	76,0	65,9












# Why is it hard to connect them?

- Collaborations are centralized (one-way)
  - Only experts included
  - Similar areas of knowledge
- Knowledge, skills, tools are specialized

# Appropedia



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- Recent changes
- Help
- Create a page
- Random page

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- Community
- Village pump

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**Papasan Chair Solar Cooker**

A solar cooker and chair when not in use



**Parabolic basket and tin can solar cooker**

Solar cooker out of local invasive species and waste materials



**Plastering CCAT Earthbag Terrace**

A sturdy, natural plaster covering to the EarthBag gardening terrace being built in front of CCAT



**Rocket stove biomass charcoal**

Use of biomass waste charcoal briquettes for rocket stove



**Rowan's portable pedal power generator**

A pedal power generator



**SALIRAJA Yurt Project**

A Yurt Roof Composed of Old Cans



**Small greenhouse rainwater catchment**

A rainwater catchment system for a greenhouse



**Solar Charged Lawnmower**

An electric lawnmower that utilizes solar power as an energy source

- (a) decentralization of conception and execution of problems and solutions,
- (b) harnessing diverse motivations, and
- (c) separation of governance and management from property and contract.



# Reach

- Content pages: ~65k
- Yearly views: >1M
- Total edits: >400k
- Number of solutions: >1k
- Hosted files: >34k
- Peer-reviewed citations: 850+

# WetLand water meter

## WetLand Engr215 Student Projects

Water Meter - Energy Monitor - Pyramidal Water Desalinator - Aquaponic System - Edible Railing - Spiral Rainwater Catchment

The Water Meter is a water quality meter designed by the Humboldt State University Engineering 215 - Intro to Design class and implemented on the WetLand mobile habitat.

## Background [\[ edit \]](#) [\[ edit source \]](#)

WetLand is a mobile self-sustainable island-based ecosystem started in summer of 2014 on a barge located on the Delaware River in Philadelphia, PA. The goal of WetLand is to offer a workspace for artists; a stage for forums on our shared future; and to combine art, life on the water, architecture, and environmental technologies.

## Objective [\[ edit \]](#) [\[ edit source \]](#)

The water meter is designed to monitor the volume, flow, and quality of water which is collected and stored on the WetLand habitat. Water on the WetLands habitat is collected through desalination of water from the Delaware river and through rainwater catchment. This water is filtered for use onboard, but requires monitoring to insure its quality for use.

About this device

**TEAM X**  
WATER METER

**WetLand**

**BACKGROUND**  
WetLand is a mobile self-sustainable island-based ecosystem located on the Delaware River in Philadelphia, PA. The goal of WetLand is to offer a workspace for artists; a stage for forums on our shared future; and to combine art, life on the water, architecture, and environmental technologies.

**WATER METER**  
Water is measured with a sensor that sends data to a microcontroller. The sensor sends the volume, flow, and quality of water which is collected and stored on the WetLand habitat.

**FLOWMETER SENSOR**  
Flowmeters are installed in the water line of the water meter. This record the volume of water being collected, and help water quality testing on the barge's water tank.

**WATER QUALITY**  
Several water quality sensors are installed on the barge of the sampling component. These sensors include pH sensor, a salinity sensor, and a temperature sensor.

**DISPLAY**  
Data from the sensors is displayed on an LCD screen on the mobile habitat. The LCD screen displays the volume of water collected, the flow rate, and the water quality data.

**ANALYSIS**  
The data from the sensors is analyzed and stored on a microcontroller. The data is then displayed on the LCD screen.

**CRITERIA**

Criteria	Value
Volume	1000 L
Flow	10 L/min
Salinity	10000 mg/L
pH	7.0
Temperature	20°C

**COST**

Item	Cost
Microcontroller	\$10.00
Sensors	\$50.00
Display	\$20.00
Wiring	\$10.00
Case	\$10.00
Total	\$100.00

**RESULTS**  
The water meter records the inflow of water into the storage tank. The water meter begins taking measurements of volume, pH, temperature, and salinity automatically when the barge is loaded on. These readings are then displayed on an LCD screen of the water meter.

**CONTACT**  
TEAM X  
HUMBOLDT STATE UNIVERSITY  
ENGR215

Team X's poster.

Made? [Yes](#)

Designed in [United States](#)

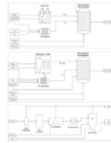
SDGs [SDG06 Clean water and sanitation](#)



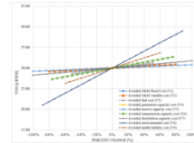
## 2021 Completed Projects & Publications [ edit | edit source ]



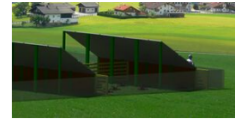
3-D printed magnetic soft magnetic helical coil actuators of iron oxide embedded polydimethylsiloxane



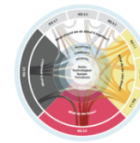
Potential of microbial protein from hydrogen for preventing mass starvation in catastrophic scenarios



A review of the value of solar methodology with a case study of the U.S. VOS



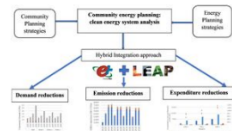
Conceptual Design and Rationale for a New Agrivoltaics Concept: Pastured-Raised Rabbits and Solar Farming



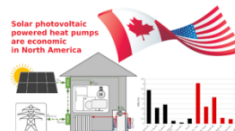
Applying a Relationally and Socially Embedded Decision Framework to Solar Photovoltaic Adoption: A Conceptual Exploration



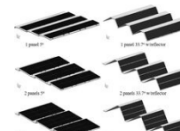
Electric Vehicle Charging Potential from Retail Parking Lot Solar Photovoltaic Awnings



Low emissions analysis platform model for renewable energy: Community-scale case studies in Nigeria



Economics of Grid-Tied Solar Photovoltaic Systems Coupled to Heat Pumps: The Case of Northern Climates of the U.S.



Geographic potential of shotcrete photovoltaic racking: Direct and low-concentration cases



Optoelectronic Properties: Carrier Transport, Recombination, and Stability



Data  
Device  
Open world

# Connecting data with real-world scenarios



# Standardizing and making projects discoverable

About this device

**Wet Land**

**TEAM X WATER METER**

**BACKGROUND**  
Wetland is a publicly well-understood, standardized ecosystem located on the Del Norte River in Humboldt, CA. The goal of Wetland is to help a community of scientists, students, and citizens in our shared region to work on to determine the life on the water, and appropriate technology.

**OBJECTIVE**  
The water meter is designed to monitor the volume, frequency, and quality of water which is collected and stored on the Wetland habitat.

**CRITERIA**

Criteria	Value
Accuracy	±0.5%
Resolution	0.1 L
Power	1000 mAh
Size	100 mm x 100 mm
Weight	100 g
Material	316L stainless steel
Connectivity	Bluetooth
Reliability	1 year
Cost	\$100

**COST**

Component	Cost
PCB	\$10
Microcontroller	\$10
Memory	\$10
Display	\$10
Buttons	\$10
Wiring	\$10
Case	\$10
Tools	\$10
Assembly	\$10
Shipping	\$10
Other	\$10
<b>Total</b>	<b>\$100</b>

**RESULTS**  
The water meter records the inflow of water into the storage tank. The water meter begins taking measure-ments of volume, pH, temperature, and salinity automa-tically when the faucet is turned on. These readings are then displayed on an LCD screen of the water faucet.

**Team X's poster.**

**Uses** [water, monitoring, meter, water monitoring](#)

**Made?** [Yes](#)

**Designed in** [United States, Humboldt, United States](#)

**Affiliations** [Humboldt State University](#)

**SDGs** [SDG06 Clean water and sanitation](#)

**License data**

**Hardware** [CC BY-SA 4.0](#)

**Software** [CC BY-SA 4.0](#)

**Documentation** [CC BY-SA 4.0](#)

## Usage

```

{{Infobox device
| image           =
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| variant-of     =
| authors        =
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| materials     =
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| cost-currency =
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| translators    =
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| license-software =
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Type

Keywords

Sustainable Development Goal

Made?  Any  Yes  No

Status

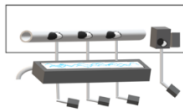
**Search**



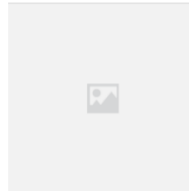
55 gallon drum solar water still



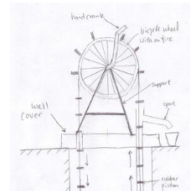
Adapted thermostatic valve for water pasteurization



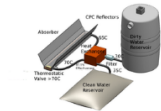
Ameyali



Compound parabolic concentrators



Depth-adjustable Rope Pump



Design Optimization of Polymer Heat Exchanger for Automated Household-Scale Solar Water Pasteurizer



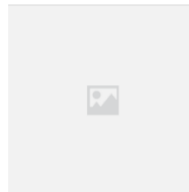
Design of a low-cost household water treatment system



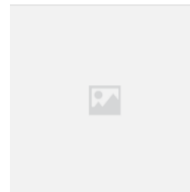
Dew collection roof retrofit



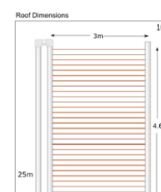
Flowmeter



Hand Washing Station



Hanging Garden that Minimizes Water Use



Hotel Perote solar pool heating system

# Guiding documentation procedures

## Preload:Vigyan Ashram Hardware



This page is part of a compendium of projects ported from the knowledge base of **Vigyan Ashram**. Please leave comments using the [talk page](#). It is currently **not open edit**.

This paragraph will appear in search results and previews for this page. Write a brief introductory text with information such as a description of your project, when was it designed and built, your motivation to solve the problem, the intended users. This will explain your project to someone who has never heard of it before.

### Contents [\[hide\]](#)

- 1 [Background](#)
  - 1.1 [UVC filters](#)
  - 1.2 [Ultraviolet purification advantages](#)
  - 1.3 [Limitations in UV water systems](#)
- 2 [Construction](#)
  - 2.1 [Bill of materials](#)
  - 2.2 [Instructions](#)
- 3 [Conclusion](#)
- 4 [References](#)

About this device

## IMAGE NEEDED



UV-based filter

**Keywords** [water](#), [filter](#)

**Uses** [solar](#), [filter](#), [water](#)

**Authors** [Priyanka Gharat](#)

**Status** [https://www.apropedia.org/Vigyan\\_Ashram](https://www.apropedia.org/Vigyan_Ashram)

# Skill training

## How to do a water audit spreadsheet

Device	Usage	Rate	Hour per day (gallons)
Toilet	flushing	1.5	1.5
Shower	showering	2.5	2.5
Kitchen	drinking	1.0	1.0
Total			5.0

Device	Usage	Rate	Hour per day (gallons)
Toilet	flushing	1.5	1.5
Shower	showering	2.5	2.5
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Device	Usage	Rate	Hour per day (gallons)
Toilet	flushing	1.5	1.5
Shower	showering	2.5	2.5
Kitchen	drinking	1.0	1.0
Total			5.0

Daily total: 5.0 gpd  
Monthly total: 150 gpd  
Yearly total: 1800 gpd

About this skill

**Keywords** measurement, water, audit

**Required hours** 3

Google sheets: How to make a water audit spreadsheet  
This is a longer video for beginners to google sheets and/or water audits. It takes data from a problem in the book To Catch the Rain and turns it into a spreadsheet.  
By Lonny Grafman  
2020-09-11  
Arcata, California

- Annotations
- 00:24 Start a new spreadsheet
  - 00:49 Calculate the water usage
  - 01:50 Setting up the instructions
  - 02:53 Set up conversion rate