Building a Low-Cost Handwash Station

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Introduction

Handwashing is one of the most important steps to reduce risk of contaminating fruits and vegetables with human health pathogens. Many diseases that can be transmitted through food are frequently found in the intestines of humans, wild animals, and domesticated pets. If a person's hands become contaminated with fecal material, pathogens can transfer to fresh produce. Washing hands often with soap and water before and during harvest of fruits and vegetables will reduce contamination risk. Having an easily accessible handwash station doesn't have to be expensive – this example is built for about $10 from a discarded wooden pallet using tools most people have on hand. Including handwashing supplies, the total cost for this station is less than $50.

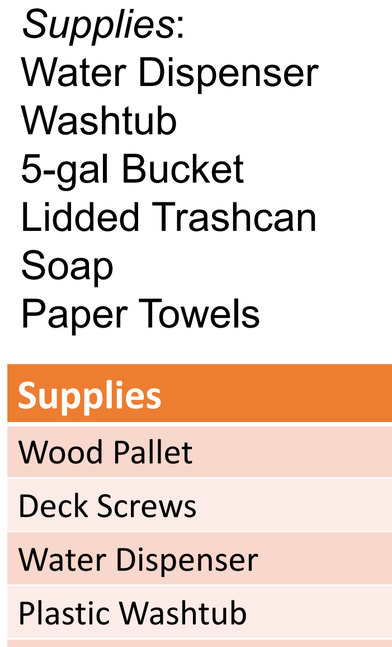
Materials, Supplies, and Tools

Materials:
Wooden Pallet
Deck Screws (1-5/8")

Supplies:
Water Dispenser
Washtub
5-gal Bucket
Lidded Trashcan
Soap
Paper Towels

Tools:
Safety Glasses
Gloves
Hearing Protection
Hammer
Pry bar
Pencil
Tape Measure
Square
Saw
Drill with bits

Supplies	Estimated Cost (2026)
Wood Pallet	Free
Deck Screws	$10.48
Water Dispenser	$18.04
Plastic Washtub	$4.86
5-gallon Bucket	$3.84
Lidded Trashcan	$6.74
Pump-top Soap	$0.97
Paper Towels	$0.68
Total	$45.61



This fully-outfitted station includes:

WATER DISPENSER. The blue "Aqua-Tainer" holds 7 gallons of water and has an open/close continuous flow valve.

WASHBASIN. Used to store supplies. Available models vary in size and thickness.

TRASH CAN WITH A LID.

WATER CATCHING BUCKET. A standard 5-gallon bucket on the ground to collect water prevents splashing.

LIQUID SOAP.

PAPER TOWELS. A holder can be mounted on the side of the station to secure roll.

Acknowledgements

This design is adapted from: Sawyer and Hultburg (2019) *How To Build A Low-Cost Handwashing Station*, University of Minnesota Extension On-farm Food Safety Program.

Construction

Disassemble Pallet and Remove Nails

Measure, Cut and Attach Pieces

Cut Legs (4 - 2" x 4") to the same length. About 36" is a comfortable height for most people.

Measure length and width of the washbasin used to hold the handwashing supplies.

Cut Leg Connectors (4 - 17" long), or to fit the length of the dishpan.

Measure from the top of the Leg far enough down so the dishpan drawer can sit on the Leg Connector and slide in and out. Mark location to align pieces.

Drill pilot holes and attach top Leg Connectors with deck screws to two Legs. Repeat on other set of Legs.

Measure and fasten the bottom Leg Connector approximately 6" up from the bottom. Repeat on other set of Legs.

Measure and cut Cross Pieces (4 – 15 1/2") long, or to fit the width of the dishpan. The basin should slide easily on the Leg Connectors. Mark location to align pieces.

Drill pilot holes and attach top Cross Piece with deck screws. Attach bottom Cross Pieces level with Leg Connectors. Attach top back Cross Piece at the back of the basin to provide a stop. Attach top front Cross Piece below the depth of the basin to allow it to slide in and out.

Cut Top Connectors (2 - 17" long). Drill pilot holes and attach Top Connectors with deck screws to create a ledge to attach top pieces.

Cut top pieces to overhang sides about 1". Evenly space planks, drill pilot holes, and attach with deck screws.

Use extra pieces to create a bottom shelf. Measure, cut, drill pilot holes, and attach planks to span the bottom Leg Connectors.

Building Notes: This is just one simple example of a handwashing station - designs can be of other sizes, configurations, or using a range of materials. When using many types of wood - particularly pallet wood - it is important to pre-drill holes to prevent splitting. Always use safety gear to prevent injury.

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