

Instant Car Wash (ICW™)

Goals for the ICW manual car wash system; effective, affordable, scalable, safe, sewer optional and environmentally friendly.

Every Goal Has Been Met

Vehicle washing is a challenge and so is identifying the best car wash solution. Constructing a permanent wash rack can require expensive architectural design, and disruptive often time-consuming construction and permitting. Once built, it can't be moved and unexpected issues from changes in work flow requirements to changing wash water treatment and disposal requirements can make it obsolete.

Hydro Engineering Inc. offers an easy to assemble, relocatable, self-contained vehicle wash system that recycles the wash water and can operate without a sewer connection.

Hydro Engineering, Inc. solves these problems with the ICW; a compact, easy to move, factory built, self-contained vehicle wash system that includes all the tools required for manually washing cars and the ability to recycle and reuse the wash water. Easy to assemble and maintain, the ICW is also a very effective car wash. Numerous systems have been installed around the world, including U.S. Embassies, automobile dealers and automotive service centers.

The ICW can be installed and connected to an existing wash bay to replace outdated car wash equipment. The ICW waste water transfer pump is placed in the existing collection sump to enable the system to reuse the wash water.

The ICW can also be used with a Hydropad wash rack platform which can be assembled above ground on existing surfaces. The wash rack is available with splash containment walls that insure wash water and debris are collected on the wash rack surface and flow to the side gutter before being pumped back to the ICW for treatment and reuse. In addition to splash walls the wash rack can be fitted with hose reels, hose booms and wash tool storage racks that simplify the carwash operation.

Cleaning capacity of the ICW is impressive. Customers report cleaning hundreds of cars per day with a single ICW system.

ICW and Hydropad Wash Rack Car Wash Solution

By using the ICW car wash process; cars are safely washed, wash water is captured and recycled, excess water is either directed to a sanitary sewer, stored for reuse or disposal by a licensed contractor.



Absolutely no chemistry is required to wash the vehicle. Detergent can be used but rinse volume is increased which increases the requirement for a sewer connection. Without chemicals, fresh water rinsing is substantially reduced. If excess water is produced after evaporation and carry off it can be discharged to a holding tank. Stored wastewater will require disposal periodically.

Safe car washing starts with proper (PPE) personnel protective gear. At a minimum safety glasses and gloves should be worn. We don't recommend cleaning chemicals but if they are added to the process, the Safety Data Sheet provided by the manufacturer should be consulted to determine if additional PPE is required.

To start the cleaning process, simply drive the vehicle to be cleaned onto the Hydropad above ground steel containment wash rack.

To properly wash a vehicle, it is essential that abrasive soils be gently removed before anything comes in contact with the vehicle surface because debris left on the surface can abrade the paint when the brush is used. A Hydroblaster high pressure cold water washer is part of the ICW solution. The Hydroblaster is supplied with extensively filtered recycled water. The water jet removes abrasive soil without rubbing it against vehicle surfaces.

Proper use of the Hydroblaster starts by grasping the gun firmly and depressing the trigger on the gun which automatically starts the machine. Thoroughly wetting all surfaces. Follow this with pressure washing wheels, tires, areas behind wheel wells and forward-facing surfaces to remove bugs. Return the gun to the tool storage rack. The Hydroblaster will turn off automatically after a short period.



At this point the car is clean of soil that can scratch the surface. The next step is removing water spots and 'road film'. Road film can't be removed with anything other than touching the surface.

Wash a vehicle at any commercial hand-held car wash using a Hydroblaster high pressure washer with either a chemical pre-spray or soap injection system or both and you will find that the road film is still on the surface. Test this by wiping the wet painted surface anywhere on the vehicle and you will see a line where touching the surface has released the road film from the paint. This is the reason that every hand-held car wash offers a foaming brush. It's there for road film removal. It's not the soap, it's the brush that is breaking the bond between the vehicle and the road film.

Road film is easy to remove with the ICW soft touch brush. The brush must be used with water flowing through it. We have lots of recycled water so we use it with the brush. When the brush touches the surface, the recycled water flowing from the brush head flushes the road film from the surface. As long as the surface remains wet the film won't redeposit. It's quick and easy. It doesn't require repeated trips back to a soap bucket.

There is really no advantage to using soap with the ICW. Some will argue that the surfactants in the soap help loosen the road film and prevent it from re-depositing on the surface but the brush removes the film and it doesn't re-deposit as long as the surface stays wet. The disadvantage to using soap with the ICW is that the soap concentration in the recycled water can increase over time. The Hydro Biodigesters do a great job of digesting the soap but if the concentration rises, more fresh water will be required for rinsing. The added water will need to be discharged either to a sanitary sewer or to an excess water holding tank.

The final step in the car wash process is to rinse the vehicle. This is done with the rinse gun at low pressure to provide a low volume fresh water rinse that removes all traces of recycled water from vehicle surfaces. The rinse operation is enhanced by using deionized (DI) or reverse-osmosis (RO) filtered water to eliminate dissolved solids from the rinse water and prevent spotting.

If the system is equipped with a high-volume blower it can be used to help dry the vehicle. A blower is very helpful with clearing rinse water from hard to reach areas. Plan on wiping glass surfaces with a clean towel.

Maintenance of the Wash Rack System

The ICW and Hydropad Containment Wash Rack System require minimal maintenance.

- Outdoor wash racks must be protected from freezing, water must be drained from the entire system.
- The surface of each Hydropad wash rack should be cleaned periodically. Dirt left on the surface should be washed into the side gutter.
- Solids accumulate in the side gutter. Clean the gutters regularly.
- The filter media will need to be changed periodically. The on-board logic controller will advise you when this is required.

ICW Components:

The ICW cabinet contains the wash water filtration and treatment system and the Hydroblaster high





pressure washer. System is completely plumbed and wired ready for connection to power and water. The ICW includes the wash tools; operating instruction placard, high-pressure wash gun, soft touch brush, low-pressure rinse gun assembly with all required connection hoses and cables. The air blower system is optional.

The Hydropad above ground wash rack system typically includes three Hydropads when paired with the ICW but a wide variety of sizes and configurations are available. The wash rack may be configured with sidewalls to contain wash water overspray. Ramps provide vehicle access onto the wash rack.

The Hydropads feature the patented side gutter. Water and debris is collected here. The water is pumped to the ICW while the solids are left in the gutter for manual removal.

Installation is Easy:

It takes about two man-days to deploy and connect the components. Factory assistance for installation and training is available.

When the ICW and Hydropad containment wash rack arrives, off-loading and assembly will require the following:

- Use of a 5,000-lb. forklift for positioning the equipment.
- Power; one 230V single phase circuit for the ICW and a second 120V circuit for the sump pump at the end of the Hydropad side gutter. Requirements differ depending on equipment options but exact requirements will be provided with Hydro Engineering, Inc. installation instructions.
- Water; A potable water supply is adequate but RO or DI filtered water is preferred.
- Where freezing temperatures are possible the equipment should be located inside a heated building to allow all season operation.

The ICW and Hydropad containment wash rack availability is 30-60 days ARO. Each system arrives with the following information:

- Site layout drawings with power and water specifications and locations.
- Equipment manuals.
- Installation instructions.

For more information, visit Hydroblaster.com, or call 801.972.1181

