

THE RAIN REPORT BY DTFX

DTFX is a Sydney based special effects production company which services the film, TV, advertising, theatre and events industries.

With over 25 years experience, we have the expertise to provide all your physical and mechanical effects needs including pyrotechnics, stunt and camera rigs, product rigs, explosions, fire and flames, rain, wind and atmospherics, and mould and model making.

Our services include design, shot planning and storyboarding, budgeting, scheduling and pre-production, and of course, the shoot.

We work closely with your creative and production team to ensure that you get the look you need at the right price.

Rain is a useful tool in the filmmaker's kit. With a little planning you can get a fantastic result for a modest outlay. This report outlines the things you need to have a great rain shoot. Topics covered include:

- > Lighting
- > Cheating Rain
- > Storms
- > Rain Heads and Nozzles
- > Rain Stands
- > Straddle Bars
- > Cherry Pickers and Cranes
- > The Oscillating Rain Head System
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Feel free to call us with any questions you might have. Enjoy!

And please check this web link to see our rain in action -
http://www.youtube.com/watch?v=fBKPlEMLg84&watch_response

Lighting

Like most things filmic, lighting is crucial to get a good rain effect. You **MUST** backlight falling rain. It goes all silvery and looks best against a dark background. Front lit or side lit rain **WILL NOT** read on film. (sometimes you can't even see front lit rain with the naked eye)

Rain is best shot in two ways – Falling Rain - backlit against a dark background.

Rain on Hard Surfaces - If for some reason you can't backlight (e.g. sun in the wrong place, no room for a light) then the next best thing is to see the rain hitting hard surfaces. This means you see the rain bouncing off roads, umbrellas, and car roofs etc. For this to be successful you must have full coverage over the area you're seeing. (a big hole in the middle of shot is an embarrassment for all concerned...)

The Best Looking Rain The best result you could hope for is to have backlit rain at night falling full coverage on hard surfaces. This looks amazing!

How to Cheat Rain

If you are not seeing the ground or any horizontal hard surfaces, you may only need a narrow pattern falling in front of camera and onto actors (if any) to give the impression of rain. This can be especially useful if you have location issues such as power lines. It is quite common to do this if you're shooting through a window and not seeing hard surfaces.

Storms

For a great storm effect, just add wind (and maybe a little smoke) (and perhaps some tree branches flying through shot!)

Types of Rain Systems - Rain Heads and Nozzles

There are a wide range of specialty rain heads and nozzles available, each of which does a different job. There's broad, flat pattern nozzles, circular nozzles, square pattern nozzles – our supplier has over 20,000 in their catalogue, so we can get the right nozzle to suit your job if we don't already have it in stock (we probably do)

Rain Stands

These are lighting stands with one or more of our specialist rain heads attached. Typically in rain stand usage they will throw a broad but not very deep pattern. Rain stands are very useful for pathways and locations where a crane or cherry picker can't be used, such as in a park or where there are overhead obstructions like awnings or power lines. They can also provide useful infill or over-camera coverage.

Straddle Bars

This is a “goal post” arrangement over the top of shot, using a variety of rain heads to achieve the best look. The stands can be cheated right to the edge of shot, so they can reach quite deep into the background if using longer lenses.

Overhead Rain – Cranes and Cherry Pickers

A crane or cherry picker allows you to get a rain head over the middle of a wider shot. In broad terms, to successfully use overhead rain you need to position the crane where it can get the rain head centred in shot. Generally speaking you get a larger coverage area with an overhead rain system.

The Oscillating Rain Head System

There are a number of types of crane-flown overhead rain heads available, but the by far the best is the new Oscillating Rain Head, exclusive to DTFX.

The Oscillating Head was originally designed for dust suppression in mining where full pattern coverage and water consumption are important issues. It gives even coverage over the area at low water usage rates.

The old style spinning head is actually a fire-fighting tool called a cellar nozzle, which is designed to dump a lot of water very quickly into a burning warehouse. It leaves a big hole in the middle of shot – which is usually where the focus of the shot is. Not so good.

The Oscillating Head uses about 1/7th the water of a spinning head and gives wider coverage. (54 l/min v 353 l/min – 15 sqm v 10 sqm {1.5”})

Lower water usage is good for the environment and requires less pumping power, which reduces costs.

The Oscillating Rain Head rig was developed for the feature film “The Square” and in the long bar configuration gives a 30 x 15 metre full pattern coverage. In standard format, coverage starts at 15 metres diameter from a Cherry Picker or Crane, or 20 metres diameter or 30 x 15 metres from a Crane. (The system can be expanded to cover any size you need, location permitting)

Difficult locations

Often a location is chosen that is less than ideal for rain. It may be that you can't park a crane, there may be trees in the way, or, scourge of rain makers everywhere, power lines.

A range of different rain heads allows us to design the rain coverage to get the shot you need.

Location Recces

A location recce is vital to work out the best way to get the shots you need. DTFX includes the cost of a half-day recce in all rain prices.

God

As with many Special Effects, God wins most arguments. Things that can upset the best-planned rain job include wind or the sun coming from unfriendly quarters.

Oddly, real rain is generally not helpful because it's rarely consistent over a shoot day or days, which means continuity problems. Sometimes real rain is hard to match, so it's best to run the rain machine even if the real stuff is coming down. That way you get consistency over the shoot.

Background Wetdown

A background wetdown is usually required to make roads, paths, trees and cars etc look like they are being rained on.

DTFX carry a full range of wetdown hoses in both 20mm (fire hose) and 40mm (fire fighter) which reach over 150 metres from the tanker.

Production Issues

Rain presents particular challenges for the Production Department, but a little planning will ensure a smooth shoot.

Cast

Where cast will be working in rain, you need to make provision for their wellbeing. This is particularly important in winter when hypothermia becomes a real danger.

The best first option is to keep cast dry on the inside.

If they are wearing wet weather gear as part of their wardrobe, then most of the work is done.

- If the cast can't wear wet weather gear for any reason, then you can still help keep their skin dry and reduce the health risks.
- A wetsuit can be worn under the costume or a waterproof under-layer can reduce water contact with the skin. In winter a wetsuit will also help keep cast warm.
- Light coloured clothes often go transparent when wet, so a flesh coloured wetsuit is a good, if somewhat expensive, option where they are wearing lightweight summer clothes. (it's probably cheaper than your lead actor going down with pneumonia though)
- A lightweight plastic poncho or raincoat under a bulkier costume could work well. The Wardrobe department can re-cut them to suit the costume, or even sew a plastic layer to the inside of a costume.
- You need sufficient costume changes to allow each set to dry between takes if the shot

starts with dry clothes (and you'll need a dryer!)

- You need sufficient towels to dry the cast off (these will need drying too, so another dryer might be a good idea)
- A Hot Room will help to bring cast's ambient temperature back to normal (this can be a KD canopy with full side flaps and a heater inside)
- A hot shower is a useful way of restoring body heat.
- A nurse or medical officer to monitor cast wellbeing should be part of your plan.

Hot Rain

DTFX can provide water heaters to reduce the chilling effect of cold water. This requires careful planning and would typically need additional tankers and pool heaters, and sufficient time to heat the water. Please call to discuss.

We can also arrange a hot shower system for cast.

Crew

Crew should bring full wet weather gear including gumboots. Camera crew in particular often get soaked. A scarf or tea towel around the neck will stop water getting in. A change of clothes may also be a good idea.

Gear

Typically the DOP will need to place some lights in the rain. Hog wire does a good job of protecting lights. The Gaffer will also take the normal precautions with power and cabling. Other gear such as dolly and tracks, set dressing and vehicles that might need to be in the rain may also need to be protected from water.

Camera

As well as plastic rain covers, you may wish to consider deflector housings for the lens if the camera will be in the rain.

Location

You should consider the effect of dumping loads of water on your location. Is there sufficient drainage? Will the ground get soaked and bog vehicles like the crane, tanker, grip and lighting trucks? Will the garden get soaked and damaged from stands and tracks and crew walking through? Can you lay boards to lessen damage, or keep crew out of certain areas?

The location recce will help answer these questions.

Types of Rain Machines

DTFX offers the following standard configurations of rain gear. Custom effects or larger

areas can be accommodated with adequate planning. We bring all our standard gear to every job, so if things change on shoot day, we can usually cover the changes.

Rain Stands

Up to 6 rain stands. Useful amongst trees or where a crane or cherry picker can't go.

Straddle bars

A goal post 6 metres across which can be used in conjunction with rain stands where required.

Cherry Picker Rain

Gives 15 x 15 metre coverage from a cherry picker. Some rain guys will tell you this isn't allowed, but Workcover exempts the usage under specific circumstances (call for more details including the Exemption Clause)

Crane Rain

Our unique crane-flown Oscillating Rain Head System gives standard coverage starting at 20 metres diameter, or 30 x 15 metres.

Tracking Rain

It is possible to track rain with vehicles with appropriate planning.

Roof Top Rain Rig

Gives effective rain on a moving vehicle from a roof-rack mounted rig. Suitable for interior shots.

Tanker

DTFX operates a 2000 litre tanker mounted on an Isuzu NPR300. It's small, easily manoeuvrable and doesn't attract unwanted attention in this water conscious world.

The tanker takes up 7 metres of roadway and needs to be parked near the crane. When towing the cherry picker it takes up 15 metres of roadway.

The tanker will run at full output (5 heads – 20m circle or 30 x 15m) for around 8 minutes, or will run one head (15m) for around 40 minutes before refill

Refill

The tanker refills in around 7 minutes – plus travel time to the nearest hydrant point if required. Most metro streets have hydrant points every 50 metres, so it's generally not an issue in town. In rural places or where there is no convenient hydrant point, a feeder

tanker often makes sense.

Pumps

We operate petrol and electric pumps.

The petrol pump is reasonably noisy, and not recommended for suburban streets or shooting sound.

The electric pump requires a 3-phase 32amp input. (4kva, 5 pin Wilco, soft start) We usually plug into the Gaffer's generator. We do not carry cable because your gaffer usually does. We can arrange for stand alone power if required. The recce will answer these questions.

Licences

Of course we have all the current licences and authorities required to make great rain.

Prices

Every job is different and the recce is the only way to work out what's best for your job, and what it will cost. However, there are price guidelines to assist with pre-recce budgeting, so call for more info.

DTFX

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