

WATER SPLASH FX NOTES

By Ron Doucet

There are thousands of ways to make an animated water splash. Substance, weight, speed, distance, and design style are all factors.

Here's just one way to do this type of water splash.

When doing splashes, think of water in these stages:

- A) Splash Impact
- B) Lace
- C) String of Pearls
- D) Pearls

A) Splash

You have the initial force impacting or protruding from the water causing the splash. You must get to the highest point of the splash relatively quick. Too many inbetweens makes it look like mud, lava, or porridge (which might be what you're going for).

That's why design is important too. Water isn't lumpy.

Make the splash non-symmetrical.

Symmetry = Crap.

Non of that old milk splash effect here.

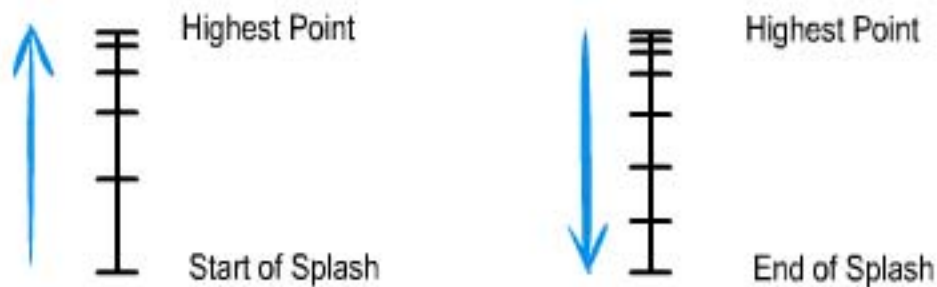


Too symmetrical, it's not interesting to look at. It looks too mechanical. Don't do this splash, even if the force is coming straight down.



This is much better, push it here or there. Note the direction of the force to tell you where to push things.

Timing Charts



You can vary timing and play around, but generally it will get up fairly quickly . . . hang in the air momentarily . . . then go on its way down.

B) Lace

After you animate up to the high point in the splash, it has to break apart. Water has surface tension, water wants to stick together for as long as possible. When it reaches it's high point, it runs out of energy, and gravity takes over. The point where the water runs out of energy is when you begin to break it apart.

It first breaks up like lace. Punch holes in the water (which is traveling from the base to the top).

Splash



Punch Holes



Lace



C) String of Pearls

When it gets to the lace stage, it continues breaking up into strings of pearls. The splash has lost most of its energy and now it is falling down, due to gravity.



String of Pearls

Pearls



D) Pearls

When it gets to the string of pearls stage, gravity over-powers the water tension, and it finally breaks down into individual drops. This causes smaller, secondary splashes and ripples. Also note there is an overlap between the String of Pearls and the Pearls stage. Have a balanced mix of the two.

Water Splashes - Things to Remember:

- Splash, Lace, String of Pearls, Pearls.
- Symmetry is evil.
- Water isn't lumpy.
- Follow arcs, as you would with character animation, think about 3D space.
- Exaggerate the amount of water.
- Water is not sharp, keep it rounded, there can be some sharper-edged shapes but the water itself is rounded.
- Timing is especially important, bad timing creates water effects that lose its weight and realism. Play around with the timing, but be mindful that it's water, not mud.
- Water always has direction. Be sure that the arc of motion is consistent and clear as to where the water is going in each drawing.