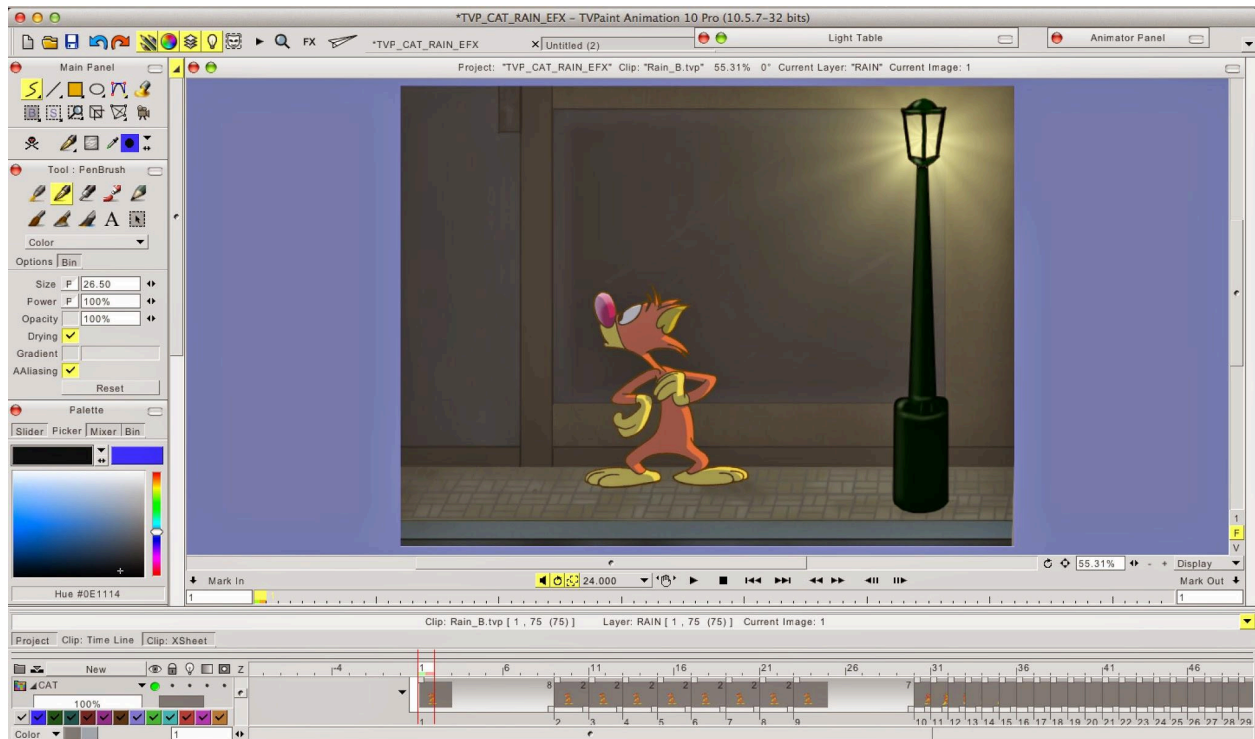


Creating RAIN Particle FX in TVPaint

- At the start of this tutorial I am assuming we've already created our Background layer, and the animation of the Cat , with a darker Tone Layer to create a rim light effect on the Cat . See the .TVPP file , here:

<https://drive.google.com/file/d/1-tgHWdOAZPuvvTl3tkhf9skaQzo0kQo/view?usp=sharing>

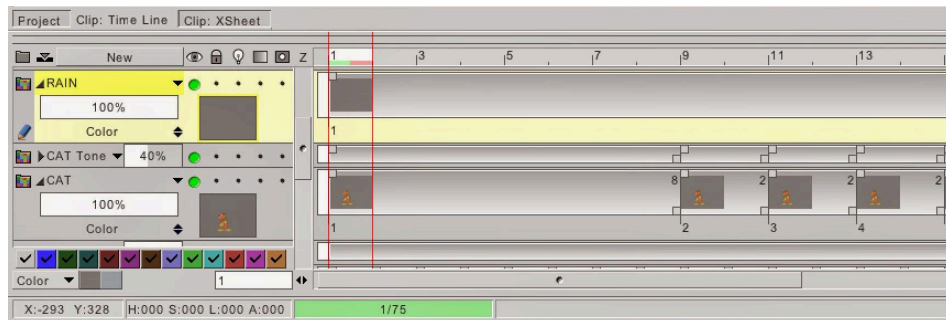
https://www.dropbox.com/s/ytem080qjnk6vk3/TVP_CAT_RAIN_FX.mov?dl=0



(Cat character copyright © Eric Goldberg . Used for Educational Purposes.)

- Now let's start to add rain and splash effects:

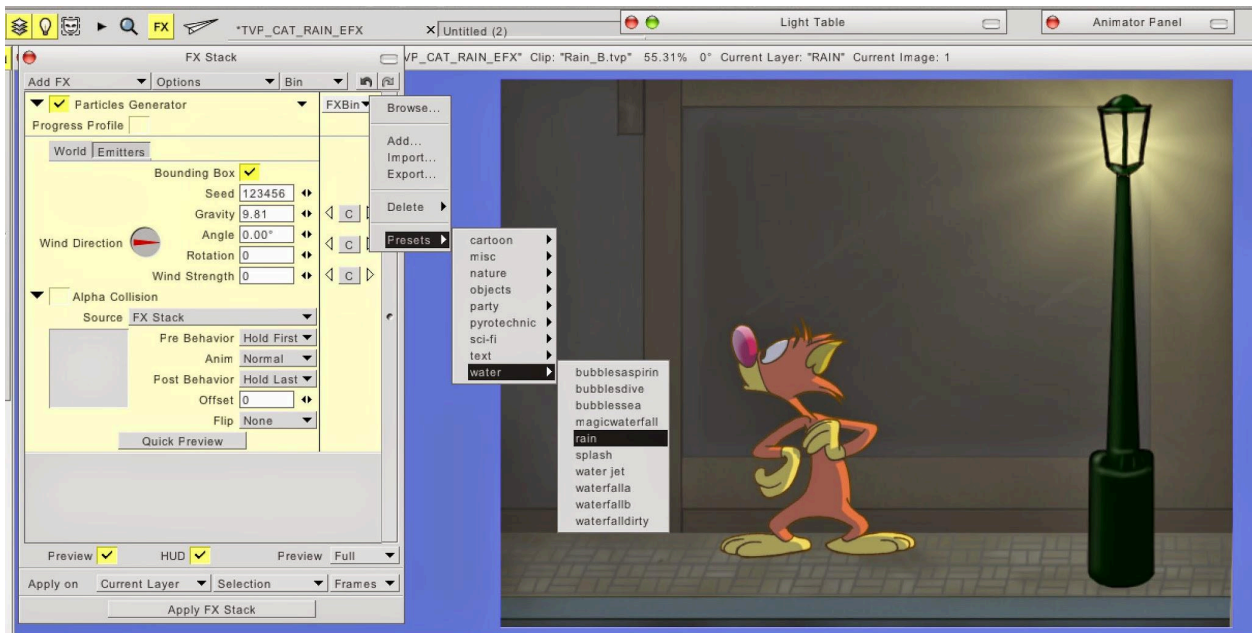
Create a New ANIM layer above the Cat layer and drag out the end of the layer to 75 frames so that it will be the same length as the Cat layer.(Name the new layer: 'Rain")



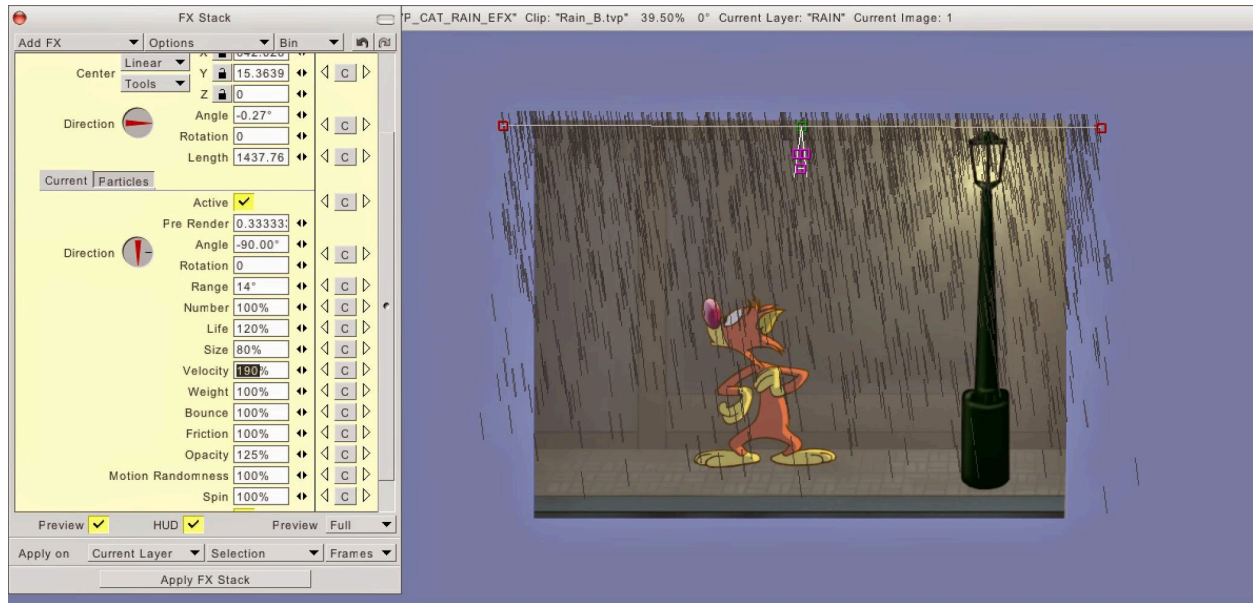
Click the **FX** button to open up the **FX Stack** . Go to FX Stack > Add Single FX > Rendering > **Particles Generator** .



In the Particles Generator window click on the **FX Bin** tab at the upper right to open the Particles FX Browser , scroll down the menu to where it says PRESETS > Water > Rain



Position the Rain in the center of the project window and pull the points on the right and left to stretch out the rain to the width of the project window.



Under the **Emitters** tab change the **Velocity** to about **160% - 190 %** so the rain will fall lower to the ground (changing the percentage next to “**Life**” will also have an effect on this) and change the **Size** to **80%** because in this case we want a somewhat lighter rain than a heavy downpour at 100% . Change **Opacity** to about **125%** (this can be changed later by lowering the opacity on the Rain layer if more transparency is desired) .



Now the Rain is ready to apply. Select ALL frames on the Rain layer and click **Apply FX Stack**. This is the result:



[TVP_CAT_RAIN.gif](#)

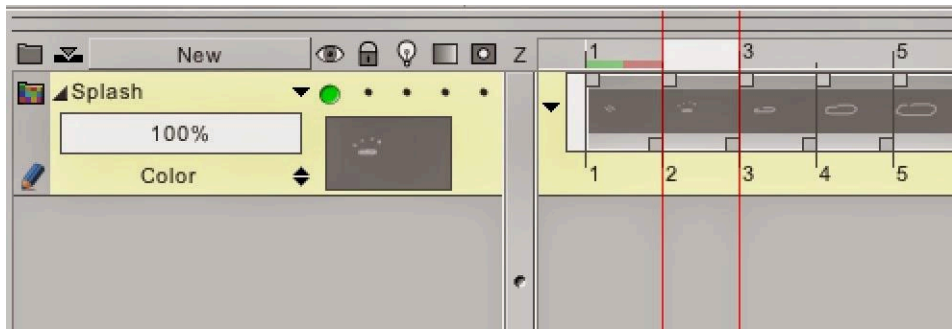
(*NOTE: you can play around with the settings in the Emitter tab such as *Velocity* , *Life* , *Weight* , *Size* , *Opacity*, etc. to change the look of the rain. Using some trial & error testing you can get the exact look you want . If you apply the FX and you decide you don't like the look , then simply UNDO and go back into the FX Stack > Particles Generator to adjust the various Emitter parameters to change the look of the rain effects .)

- Now let's Make a SPLASH effect

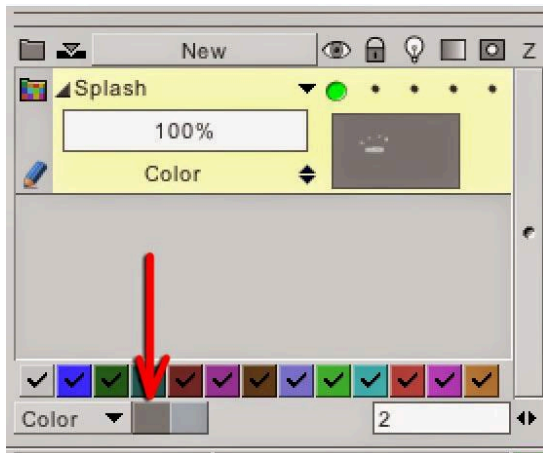
Create a **new TVP project** with these settings:

Project Size	
	Custom ▼
Width	145 ◀▶
Height	85 ◀▶
Frame Rate	24.000 ▼
Aspect Ratio	1.000 ▼
Field	Progressive ▼
<input type="button" value="New Project"/>	

Drag out the default Anim layer to have 5 frames to animate a simple rain drop splash.



Make sure that your background color is set to gray so that you'll be able to see what you are about to draw. Click the little box on the left at the bottom left of the timeline and then the cursor will turn into a cursor with a question mark underneath it, from there anywhere you click will be the new background color.



Now choose the standard **Pen tool** and change the color to White in the Color Picker.

Go to the first frame and draw a few lines that looks like this



(start of the splash)

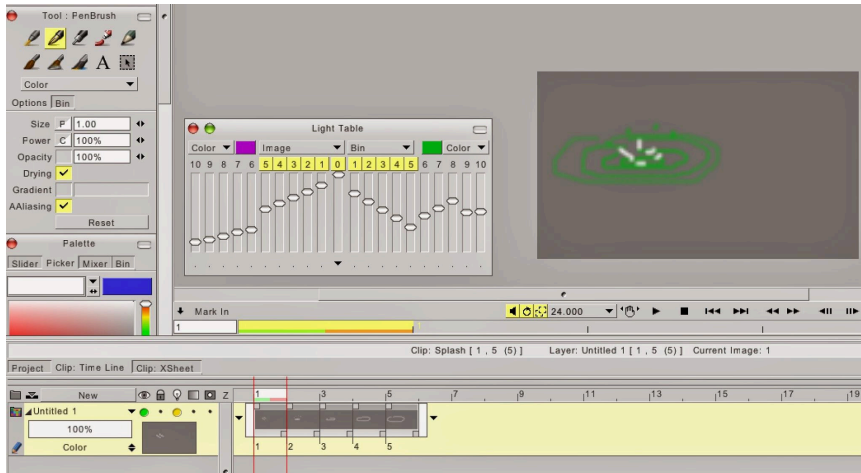
Now go to the next frame and drawn an image like this (ripple beginning to form)



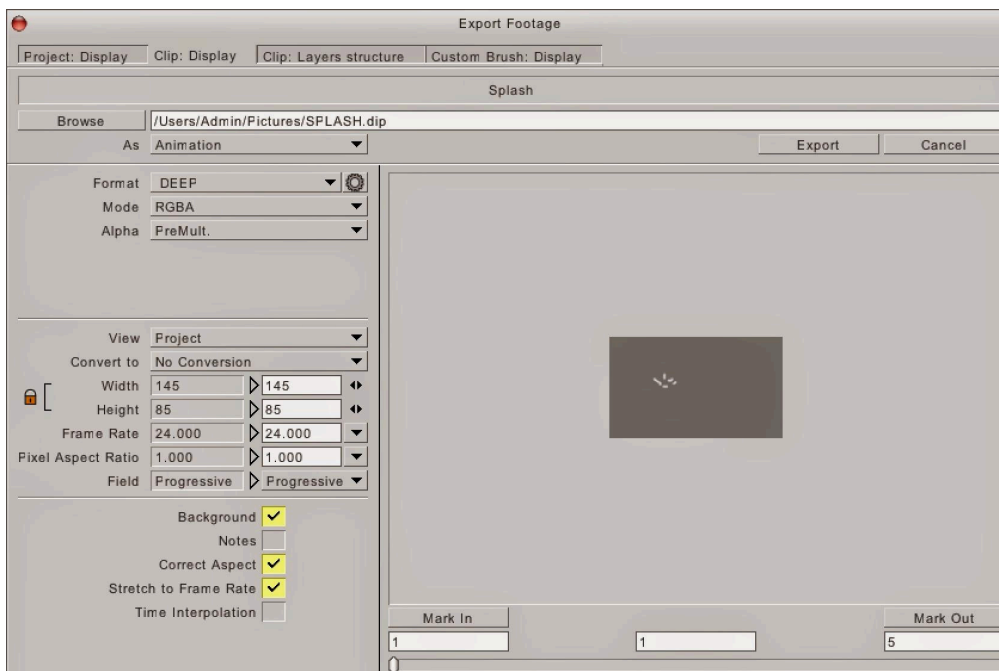
Go to the next frame and draw the progression of the ripple getting a bit larger.



On the next frame the ripple a bit larger , and on the last frame the ripple is at it's largest . Remember to use the Light Table so that you can see what you are drawing from one frame to the next .



Scrub back and forth on the timeline to watch the splash animation and once you are happy with the simple splash animation you will need to **Export** the splash animation as a **DEEP** file (file extension **.dip**) . Name the file **SPLASH.dip** . Save it to a folder on your computer where you will be able to locate it again.



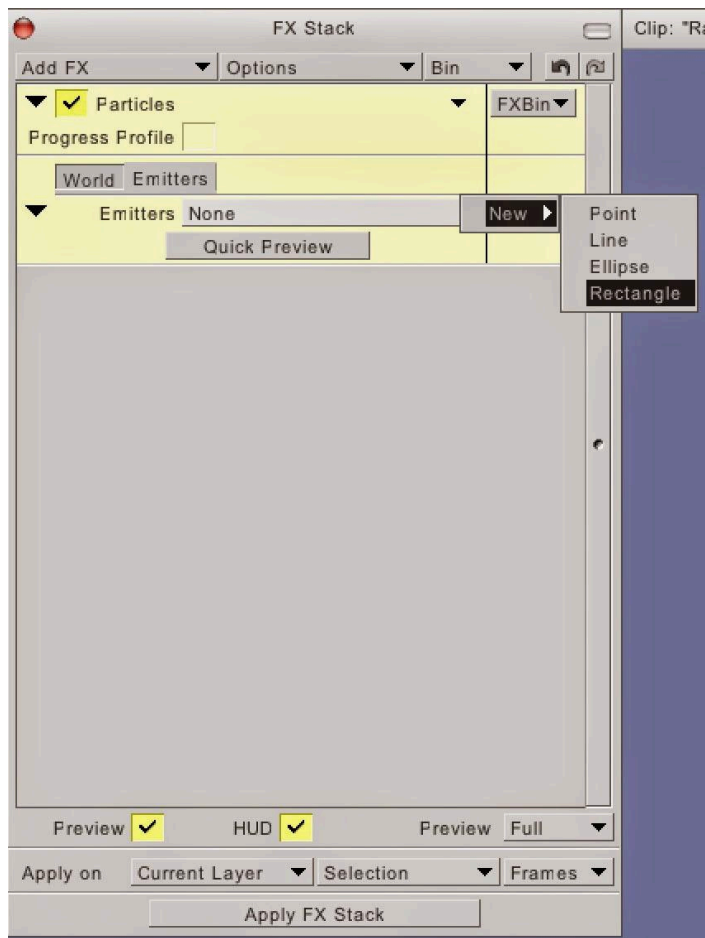
Add the Splash -

Go back to the *TVP_CAT_RAIN_EFX.tvpp* file.

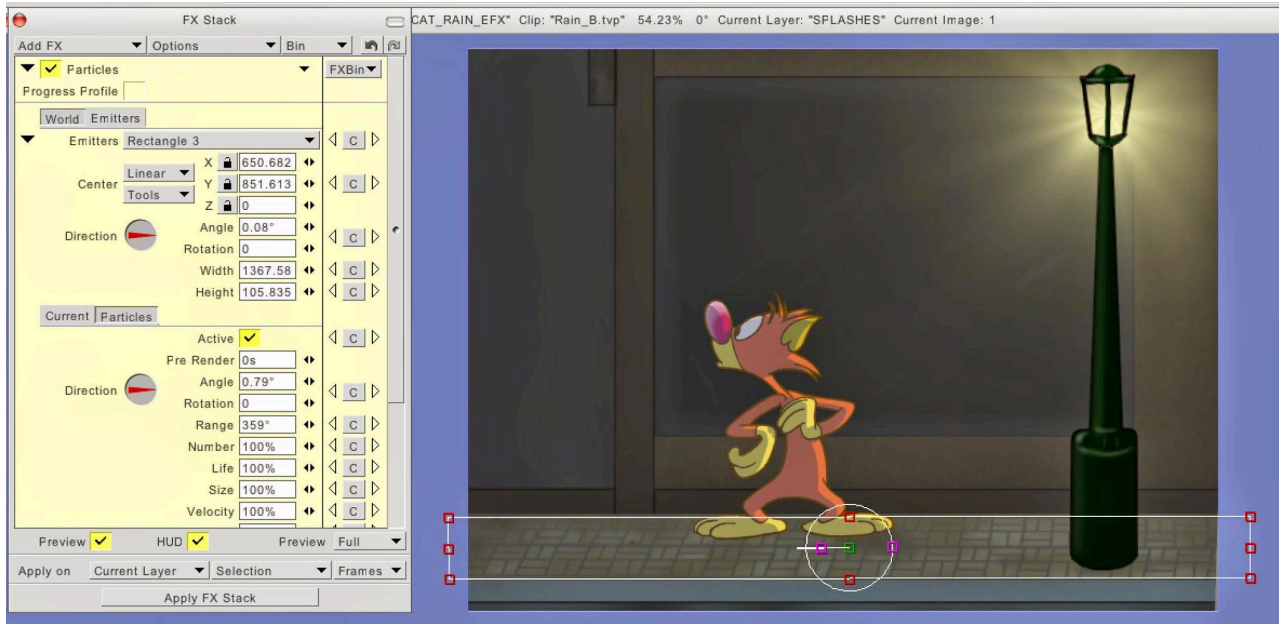
Create a new ANIM layer above the Cat layer (below the Rain layer) and name it Splashes.

Make it the same length as the Rain and Cat layer .

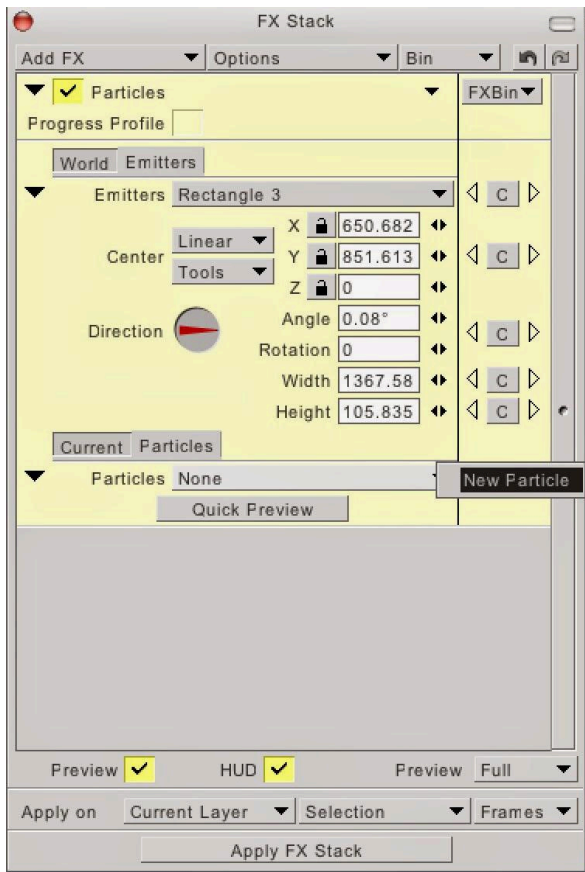
Go to the FX Stack > Rendering > Particle Generator and open another Particle Generator panel . In the Particles Generator go to the Emitters Tab to change the Emitters from **None** to **New > Rectangle**.



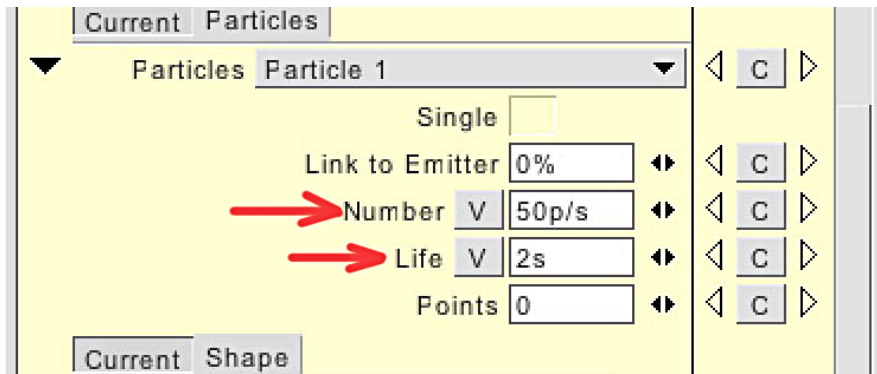
Drag the Rectangle and position it with the handles to cover the area of the ground plane where you want the splashes to fall.



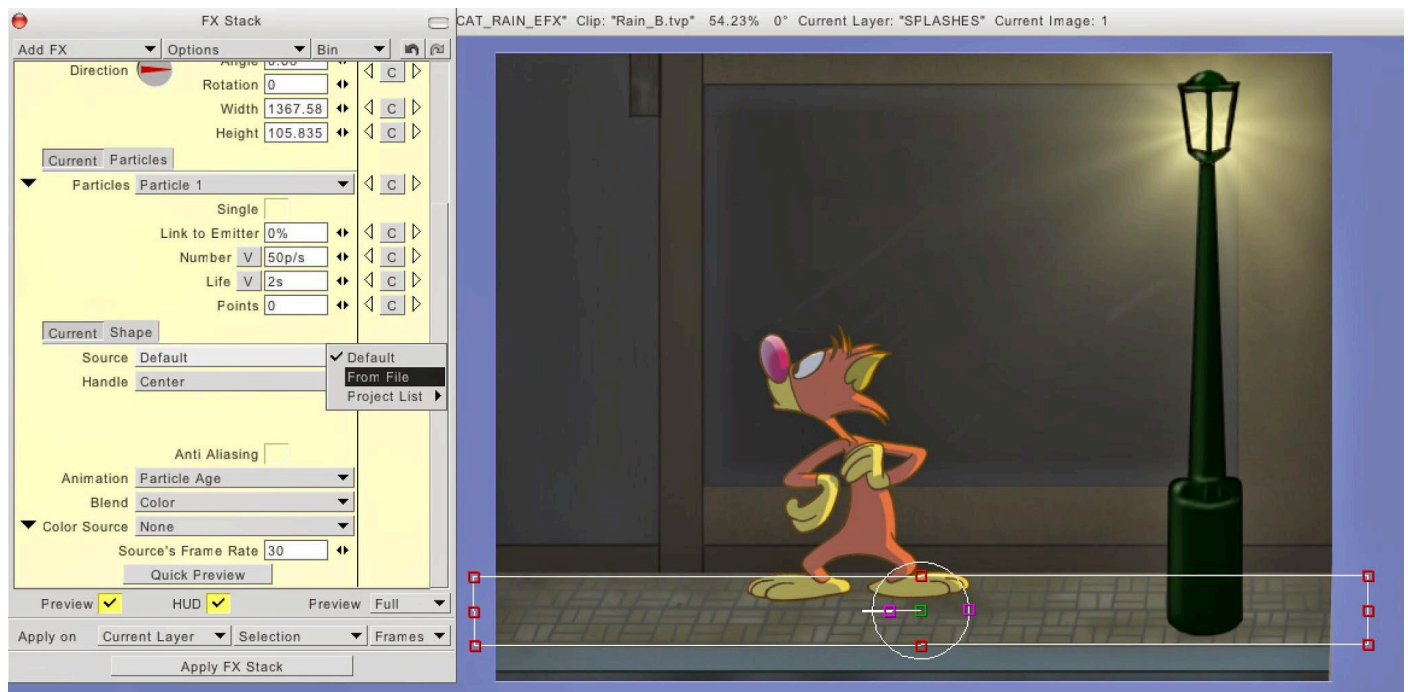
Now click the **Particles** tab and create a **New Particle**.



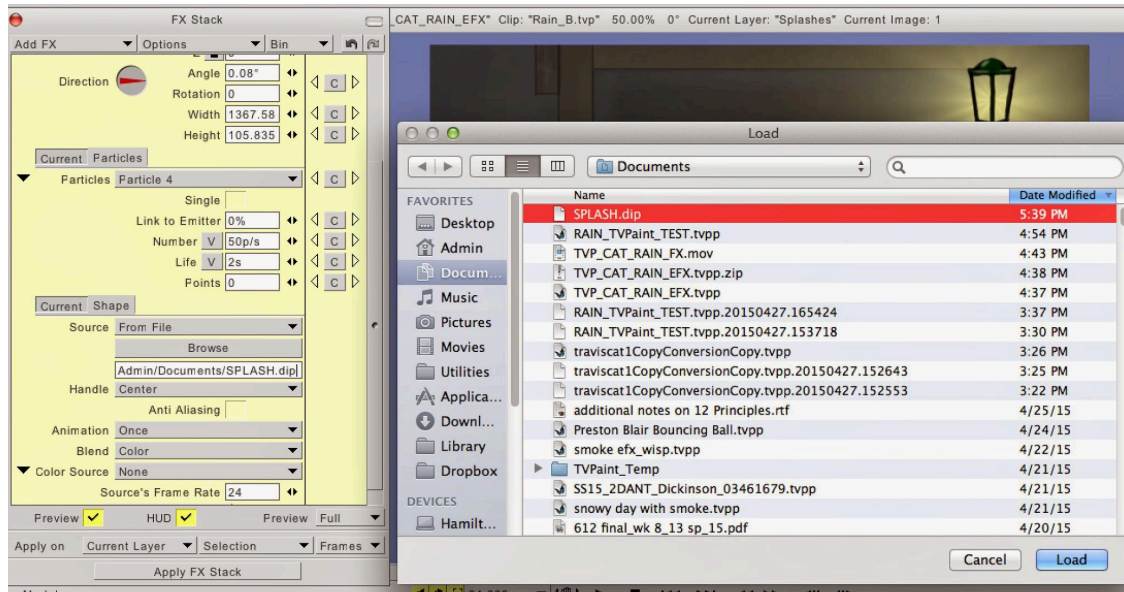
Settings will appear for the new Particle. Change the **Number** to **50 p/s** . (This will control the amount of particle splashes that will appear on the ground -- if you want more splashes you can change the number to something higher such as **90 p/s** . Change the **Life** to **2s** so that the splashes will vanish quickly.



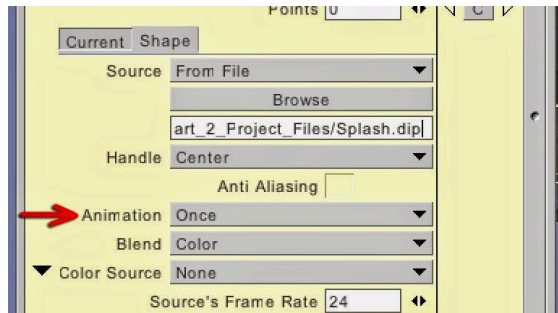
From here: click on the **Shape** tab.
Change the **Source** from **Default** to **From File**.



Then for the Source select the **SPLASH.dip** file that you created earlier.

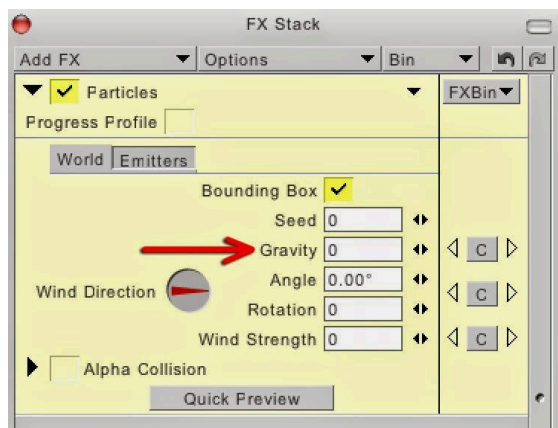


Set the Animation to Once so that the animation of the splash will play through entirely.



Now if you scrub timeline you should see your particles in action, but they are all moving down or up when they shouldn't be. **To fix this you have to turn off the gravity.**

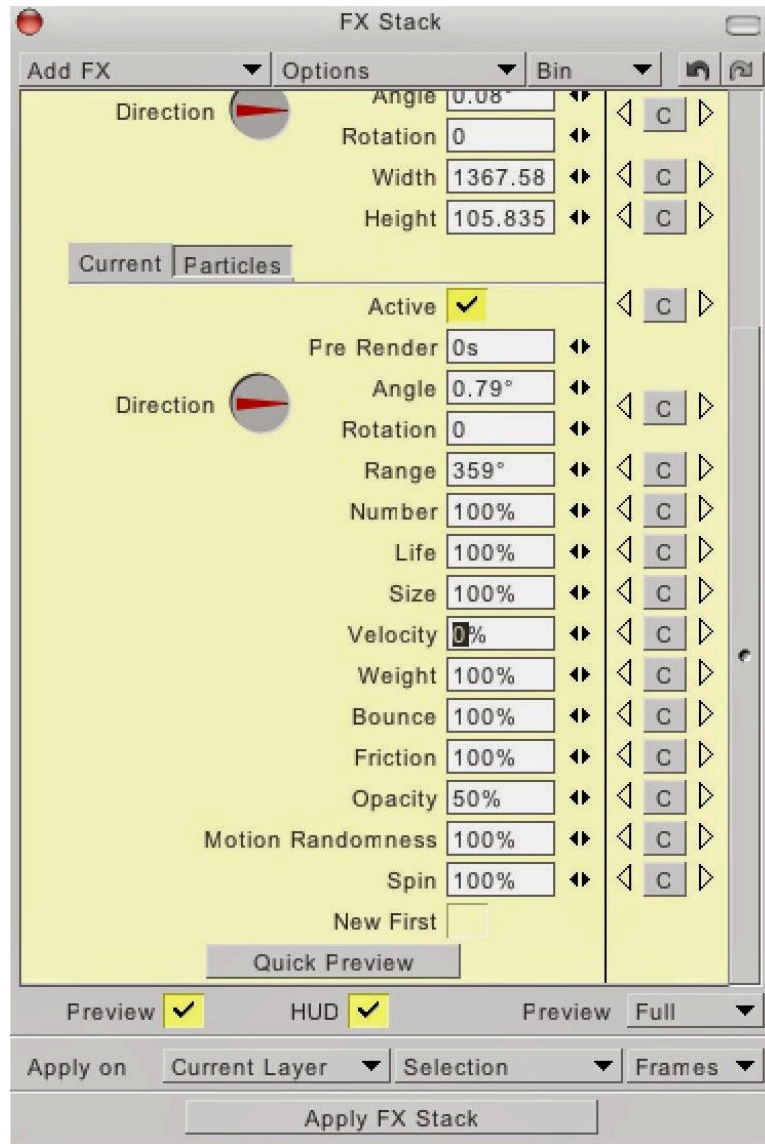
Go to the **World** tab and change the **Gravity** to 0.



Now when you scrub the timeline you see the particles moving in every direction. This is because the **Velocity** needs to be turned to **0**.

From the Emitters tab click the Particles tab , then click the Current tab.

There you will see the **Velocity**; change it to **0**. Now the particles should stay within the Rectangle.



Also: Lower the **Opacity** to 50% - 75% so that the Particles match the opacity of the falling rain.

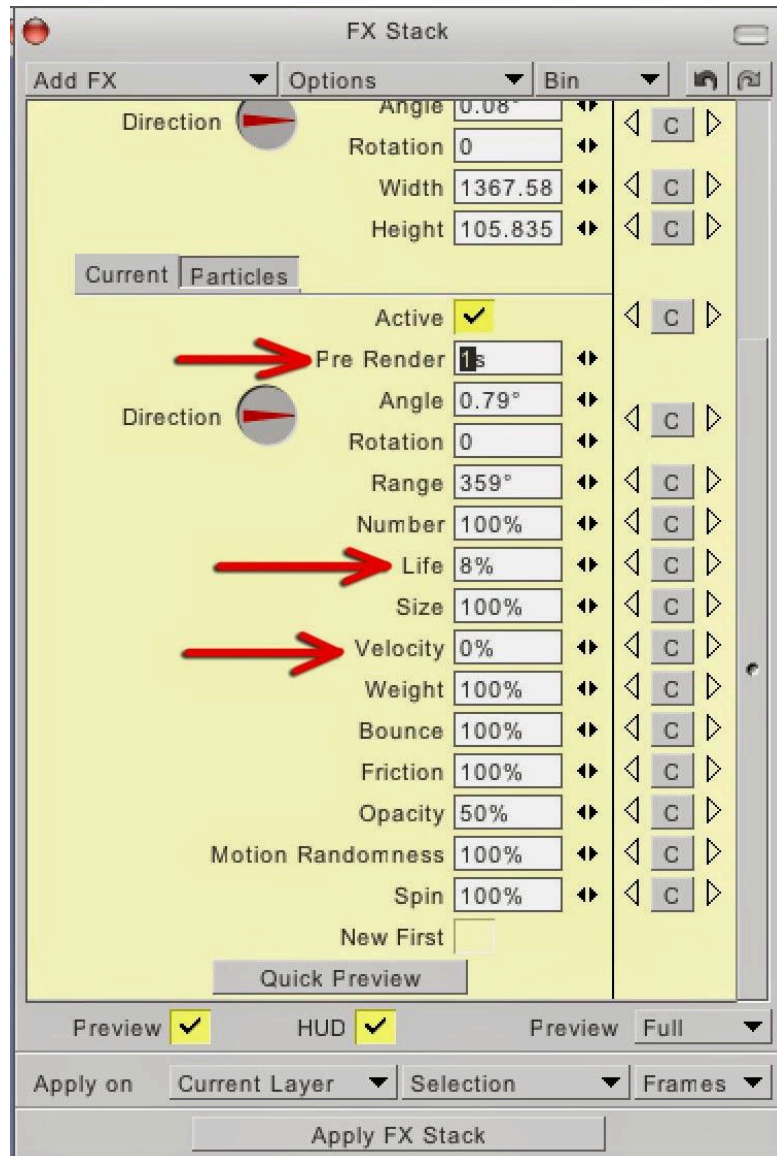
Now the particle set up is almost finished.

Click the **Current** tab. (Next to the **Particles** tab)

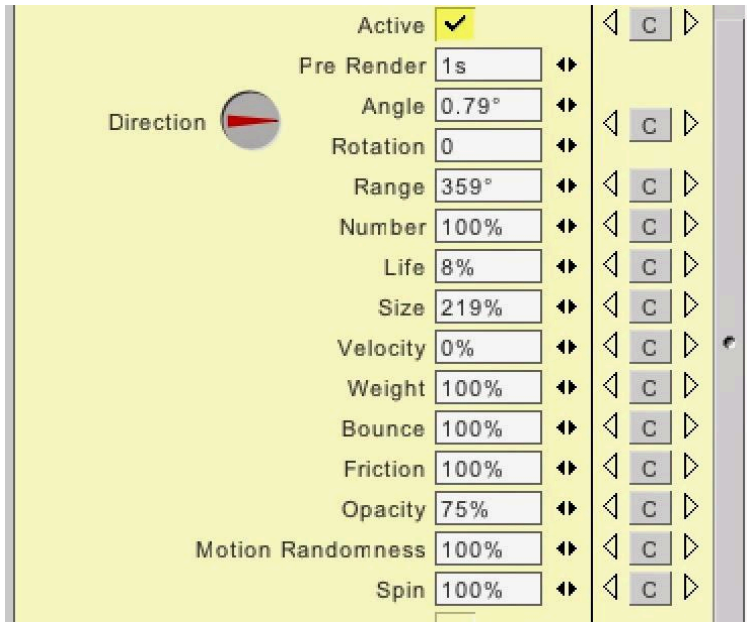
Change the **Life** to **8%**.

Also change the **Pre Render** to **1s** so that they will already be in motion on the first frame.

Without this there will be nothing happening on the first frame.

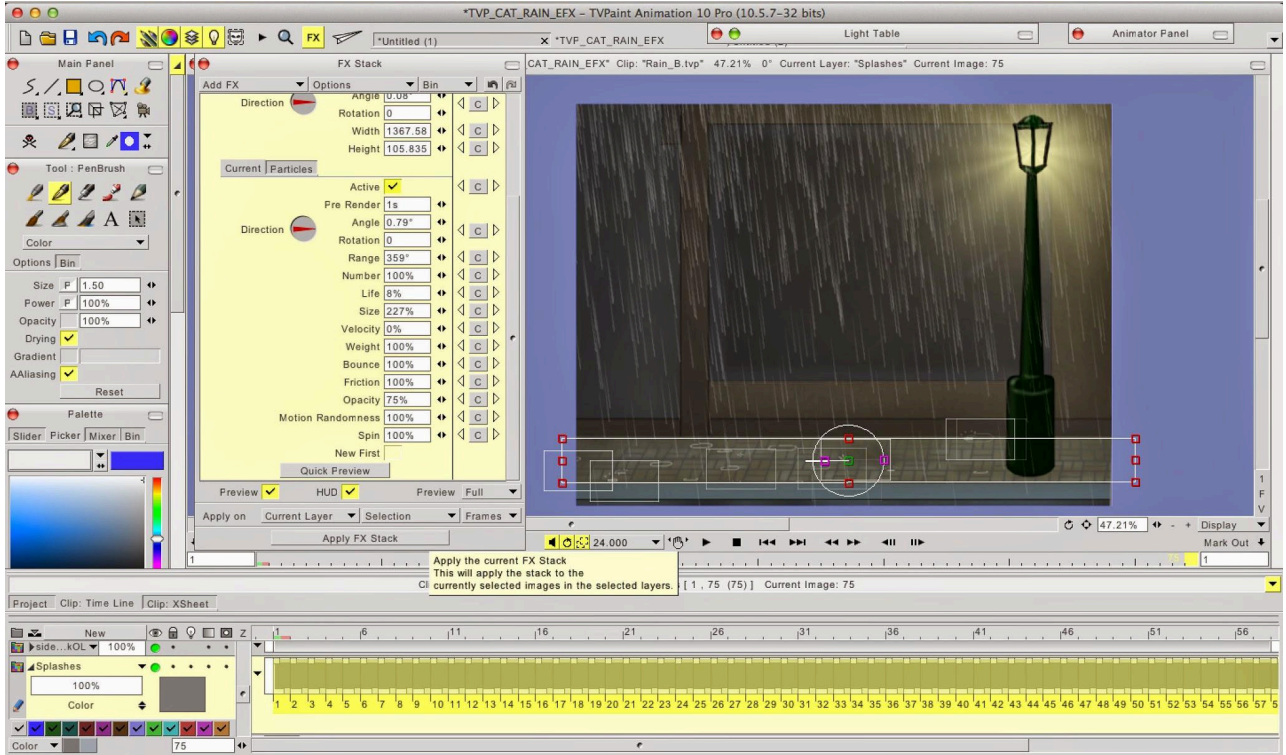


* Depending on the SIZE of your TVPaint project you may also need to adjust the size of the particles under the Current Tab > Size , so that the size of the splashes appear in the correct proportion to the rest of the scene.



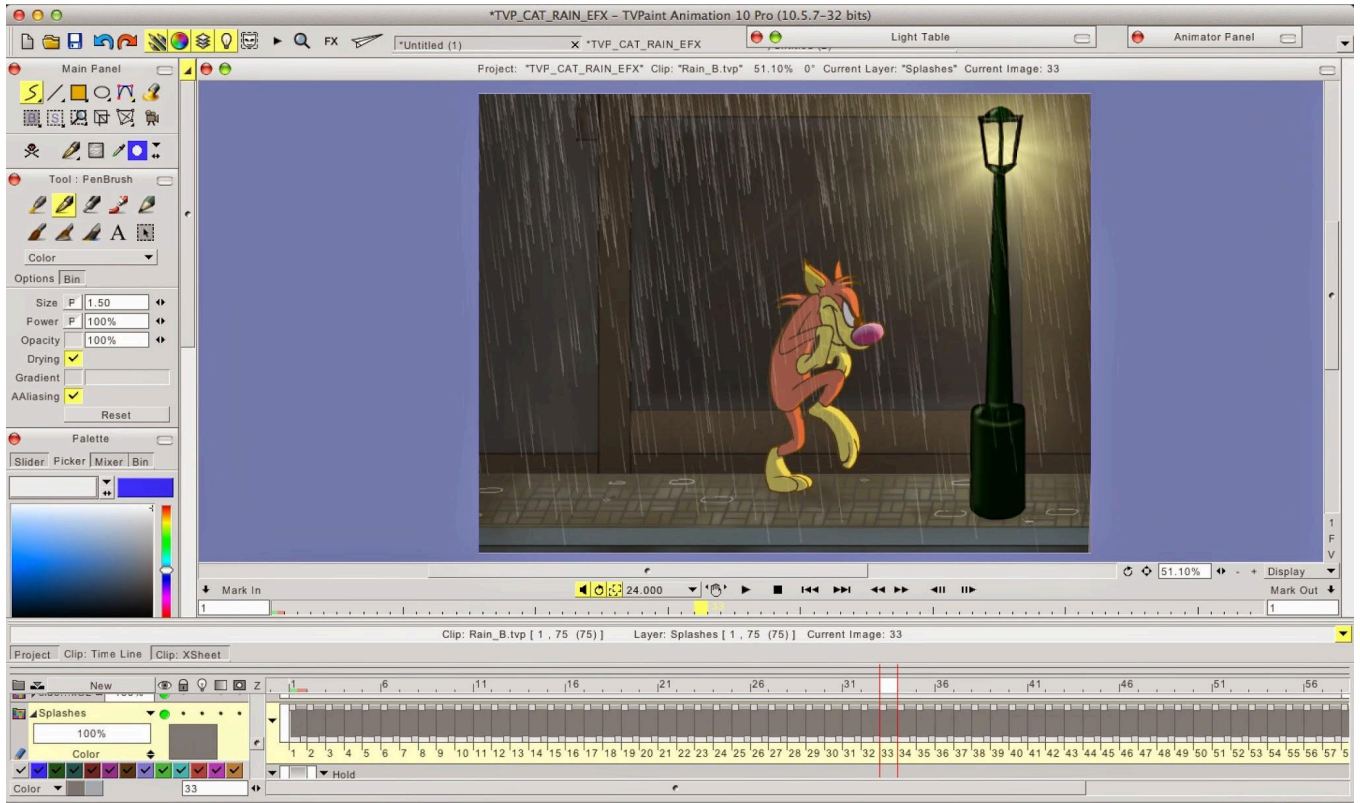
(in this case I increased the size of the Splashes to 219% to fit the size of the background in the Cat TVPaint project)

The set up is now complete. Select all the frames on the Splashes layer and click the **Apply FX Stack** button at the bottom of the FX Stack window.



Move the Splashes layer below the Lamp Post layer so that the splashes will be behind the lamp post.

Now playback your scene to see the rendered Rain FX and Splashes FX.



For more information on the Particles Generator FX see this tutorial on the [TVPaint website](#):



[The FX Stack - Create Cartoon Smoke FX \(advanced\)](#)

[\(*Download the TVP Project File used\)](#)

And see the TVPaint 10/10.5 User Manual , [Section 18 - The Rendering > Particles Generator effect](#)

Or the TVPaint 11 User Manual , [Section 20 - The Rendering > Particles Generator effect](#)

TVPaint User Terrence Walker (Studio ArtFX) offers an advanced 3-hour video tutorial on how to use the TVPaint FX Stack Particles Generator , [“TVPaint Particle Magic”](#) , which you may want to purchase to learn more about the powerful effects possible with TVPaint.



[TVP CAT RAIN FX.gif](#)

