Vanguard **Weather**

Snow that settles, rain that pours off every edge, sand, fog and lamp glow — for 3ds Max, in one click.



1 · Getting started

Install

Run **VanguardWeather_Setup_1.5.1.exe** (right-click → *Run as administrator*). It installs the plugin into every 3ds Max it finds from 2024 to 2027. Close 3ds Max before installing — a running Max keeps the old plugin file locked.

Activate

1. In Max open **Utilities** → **Vanguard Weather** and expand the **Licence** rollout.
2. Press **Copy** next to *Your Hardware ID* and send it with your order (or use **Get a licence**).
3. Paste the licence text you receive into the box and press **APPLY LICENCE** — or **Load file…** for a .lic file. The status line shows the plan and days left.

> Without a licence the plugin runs in a limited mode: falling snow, rain or sand is capped at 2,000 particles. Everything you set up is kept and runs in full as soon as the licence is applied.

Where it appears in Max

Place	What you find
Utilities → Vanguard Weather	Presets, "MAKE WEATHER", Weather Material, paint brush, bake, licence. Start here.
Create → Geometry → VanguardFX → Vanguard Weather	The falling volume (snow / rain / sand) — drag a box in a viewport. It shows the Vanguard sheep badge; click anywhere on the badge to select it.
Modifier list → Vanguard Snow	The world-space modifier that builds real snow / sand geometry on an object.
Material Editor → Maps → Weather Map	Wetness, puddles, rain ripples, drops on glass and snow sparkle as a texture.
Customize → Toolbars → VanguardFX → Weather	A toolbar button that opens the utility.

2 · Your first result in 5 steps



Step 1 — any scene: here a city block, no weather.



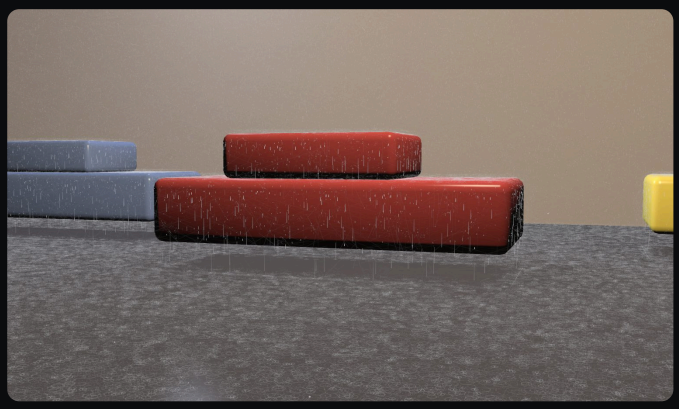
Step 5 — "Heavy snow" applied to the whole scene, rendered.

1. **Open your scene** and select the objects that should get weather (or nothing, if you want the whole scene).
2. **Utilities** → **Vanguard Weather** → **Preset:** pick one, e.g. *Heavy snow*. The description under it tells you what it does.
3. **Apply to:** *Selection*, *Whole scene*, or *Inside the weather volumes*. Leave the three boxes ticked (snow on the objects, falling snow over them, materials).

4. **Press MAKE WEATHER.** Snow is built on every up-facing surface the sky can reach, a Vanguard Weather volume is placed over the area, and the materials are wrapped so the snow, wetness and puddles show. The status box reports what was made.
5. **Render.** Snow on objects is real geometry and renders in any renderer. The falling snow/rain is added on top with the GPU — see chapter 5. Change anything afterwards: every object, modifier and material made is an ordinary, editable Max object. **Remove** undoes it all.



"Storm" on the same street: wet glossy road, puddles, slanting rain, splashes.



Rain stopping on car roofs and pouring off their edges (collisions + run-off).

3 · Presets & recipes

Presets are in centimetres and converted to your scene units. After applying, every value below can be changed on the objects themselves.

Preset	Snow depth	Coverage	Particles / m²	Fall speed	Wind	Use it for
Light dusting	1.5 cm	0.55	1.5	80 cm/s	20 cm/s	First snow, roofs white and ground showing.
Heavy snow	14 cm	1.0	5	100 cm/s	30 cm/s	Deep rounded snow on everything facing up.
Blizzard	20 cm, drift 0.7	1.0	12	150 cm/s	900 cm/s	Drifts behind walls, sideways snow.
Winter night	10 cm, overhang	1.0	25	80 cm/s	60 cm/s	Snow on every ledge and rail, wet glossy street, lamps glowing in falling snow.
Drizzle	—	wet 0.45	3	500 cm/s	50 cm/s	Damp, darkened surfaces, a few puddles.
Storm	—	wet 1.0, puddles 0.35	10	900 cm/s	500 cm/s	Soaked city, rain rings in puddles, drops on glass.
Sandstorm	sand layer	—	20	120 cm/s	1500 cm/s	Sand on ledges, brown haze, grains racing sideways.

Recipe: lamps glowing in a snowy night

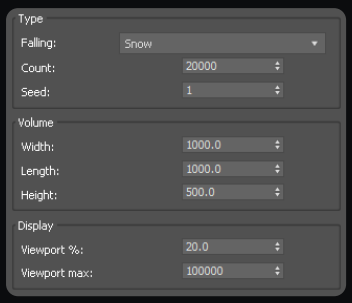
Apply *Winter night*. Put an omni or photometric light at each lamp head. On the Weather volume set **Fog** 6 /km, fog colour dark blue-grey (40,48,62), **Lamp glow** 1.5, **Glow size** 300 cm, **Drops lit by lamps** 1.5. The snow lights up around each lamp and fades into the dark.

Recipe: storm over a city with a tornado

Apply *Storm*, then in the volume's **Tornado wind** rollout pick your Vanguard Tornado. Influence 1.0, Carried for 3 s, Reach 300 m. Drops near the funnel are swept round it; far away the rain is untouched.

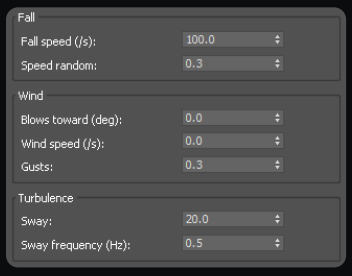
4 · Every control — the Vanguard Weather volume

Select the volume and open the Modify panel. Rollouts from top to bottom.



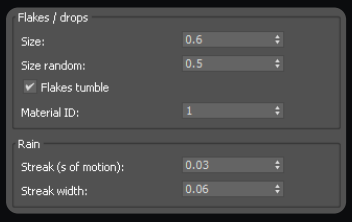
Type, Volume, Display

Control	Range · default	What it does
Falling	Snow / Rain / Sand · Snow	What falls. Changes shape (flakes, streaks, grains) and defaults.
Count	0–10M · 20,000	Particles in the volume at render time. Raise for denser weather; the GPU handles millions.
Seed	· 1	A different random pattern with the same settings.
Width / Length / Height	· 1000 / 1000 / 500	Size of the box particles fall in. Cover only what the camera sees.
Viewport %	0–100 · 20	Share of the particles drawn in the viewport.
Viewport max	· 100,000	Hard cap for the viewport, keeps it fluid.



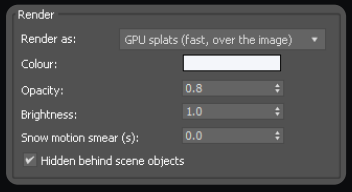
Motion

Control	Range · default	What it does
Fall speed	· 100 /s	Snow 50–150 cm/s, rain 500–900 cm/s.
Speed random	0–1 · 0.3	Each particle's speed varies by this share.
Blows toward	−360–360° · 0	Wind direction in the top view.
Wind speed	· 0 /s	Sideways speed; slants rain, drives a blizzard.
Gusts	0–2 · 0.3	How much the wind varies over time.
Sway / Sway frequency	· 20 / 0.5 Hz	The wobble of falling flakes. Lower for rain.



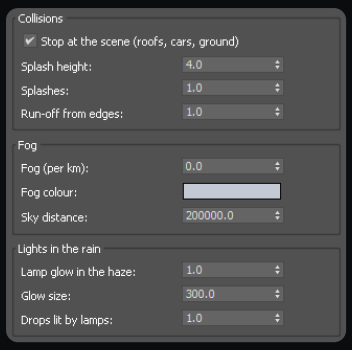
Look

Control	Range · default	What it does
Size / Size random	· 0.6 / 0.5	Flake or drop size and its variation.
Flakes tumble	on	Flakes rotate as they fall (geometry mode).
Material ID	· 1	ID given to the particle mesh.
Streak	0–1 s · 0.03	Length of a rain streak as seconds of motion.
Streak width	· 0.06	Thickness of the streaks.



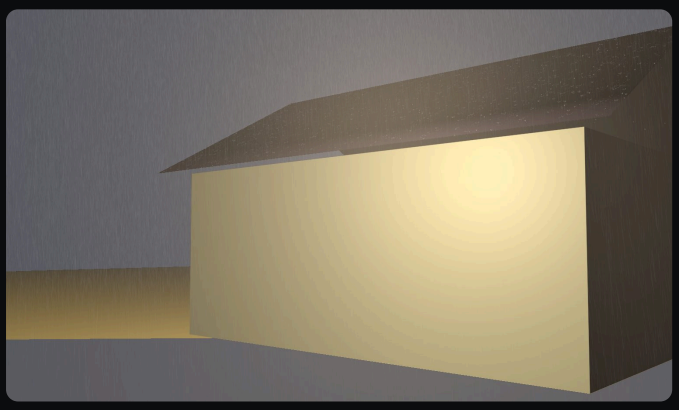
Render

Control	Range · default	What it does
Render as	GPU splats · Geometry	*GPU splats*: drawn over the finished image in a fraction of a second. *Geometry*: real triangles that any renderer renders (slower, but in reflections).
Colour / Opacity / Brightness	· white / 0.8 / 1.0	How the splats look. Sand ≈ (205,165,115).
Snow motion smear	0–1 s · 0	Motion blur for snow and sand.
Hidden behind scene objects	on	Particles behind a wall are not drawn. Keep on.

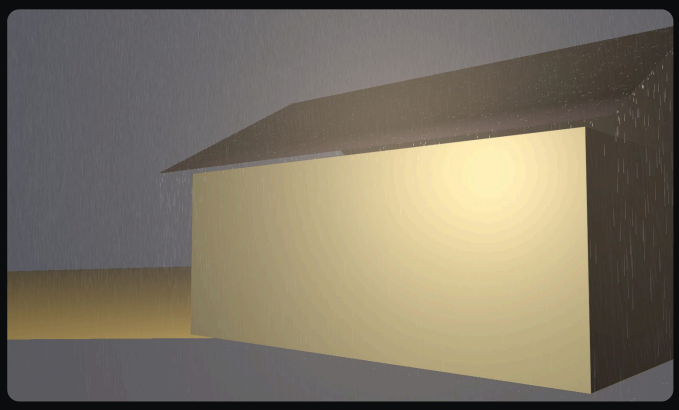


Collisions, splashes & fog

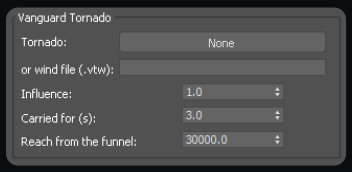
Control	Range · default	What it does
Stop at the scene	on	Drops end on roofs, cars and the ground instead of passing through.
Splash height / Splashes	· 4 / 1.0	Crowns, rings and beads where rain lands.
Run-off from edges	0–20 · 1.0	Water pouring and dripping off every lower edge — eaves, car roofs, lamps. Found automatically.
Fog	0–50 /km · 0	Haze density. 2–6 for a misty street, 10+ for a sandstorm.
Fog colour / Sky distance	· grey / 2 km	Haze tint; how far the empty sky counts.
Lamp glow in the haze	0–50 · 1.0	Scene lights glow through the fog.
Glow size	· 300	Radius of each glow.
Drops lit by lamps	0–50 · 1.0	Rain and snow near a lamp light up.



Run-off 0

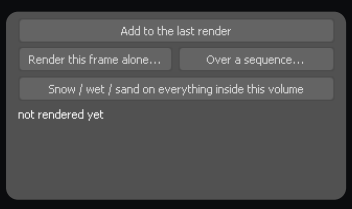


Run-off 1.0 — water pours off the edges



Tornado wind

Control	Range · default	What it does
Tornado / wind file	node or .vtw	A Vanguard Tornado in the scene, or its exported wind file.
Influence	0–5 · 1.0	How strongly the funnel moves the particles.
Carried for	0.1–30 s · 3	How long a particle is carried by the wind.
Reach from the funnel	· 300 m	Beyond this distance the tornado has no effect.



Buttons

Add to the last render puts the weather over the image in the frame buffer. **Render this frame alone…** and **Over a sequence…** write images to disk. **Snow / wet / sand on everything inside this volume** covers every object in the box. The status line shows what the last render did.

4 · Every control — Vanguard Snow modifier

Control	Range · default	What it does
Snow on · Depth	· 10	Thickness of the layer on flat ground.
Steepest slope / Thins over	0–89° · 55 / 20	Steeper faces get no snow; the layer thins over this many degrees.
Coverage · Patch size · Seed	0–1 · 1.0 / 80	Below 1 the snow breaks into patches of this size.
Street level coverage / band	0–1 · 1.0 / 40	Snow amount on the lowest surfaces (streets) and their height band.
Rounded lip · Soften · Overhang	· 6 / 2 / 0	Rounded snow edges, smoothing passes, a cornice jutting over edges.
Bumps · Bump size	0–2 · 0.25 / 50	Unevenness of the surface.
Detail · Max triangles · Viewport	· 3 / 500k	Edge length of the snow mesh; cap; coarser viewport preview.
Shelter from · strength · rays · spread · distance	Whole scene · 1.0 · 24 · 25°	What blocks snow from the sky (no snow under roofs and trees). **Use the GPU** gives the same result faster.
Wind: Blows toward · Drift · Lee reach	· 0° / 0 / 300	Moves snow into drifts behind walls, off windward faces.
Regions · Inside · Soft edge · Strength	objects · No snow	Any objects as gizmos: no snow / snow only here / full snow inside them.
Use painted colour · Map channel	off · 0	White vertex paint = snow (see the Paint brush).
Result · Snow material ID · No snow on IDs	Object + snow · 2	Keep the object or output snow only; IDs for the snow and IDs to skip.
Closed solid · UV tile size	on · 100	A closed shell (for SSS) and UV mapping for textures.

Buttons: **Update shelter** (after moving objects), **Snow material**, **Paint snow / wetness (brush)...**.

Weather Map (texture)

Control	Default	What it does
Output	Wetness	Wetness mask, Puddles mask, Rain ripples (bump), Drops on glass (bump), Snow sparkle.
Wetness · Upward faces · Dry patches · Patch size · Under cover stays dry	1 · 0.7 · 0.3 · 100 · on	Where surfaces are wet.
Puddle cover · size · edge · only flatter than	0.3 · 200 · 0.1 · 0.97	Puddles on flat ground only.
Ring spacing · Drops per second · Ring strength	30 · 1 · 1	Animated rain rings in puddles.
Drop size · Run speed · Drops	0.4 · 8 · 1	Drops sliding down glass.
Sparkle amount · size	0.04 · 0.25	Glints in snow.

Utility: Weather Material & Paint

Weather Material puts a cover — Snow, Sand, Dust, Moss, Mud, Wet, or any material of your own with maps and displacement — on the selected objects. **Amount**, **Only on upward faces**, **Patches**, **Patch size** decide where; **Follow the paint brush** uses your painting; **Displacement** gives the cover real height. **Paint (brush)** opens a vertex-paint brush with size, strength and falloff: paint white where you want snow, wetness or sand, black where you don't. **Bake snow to a mesh** freezes the result for export.

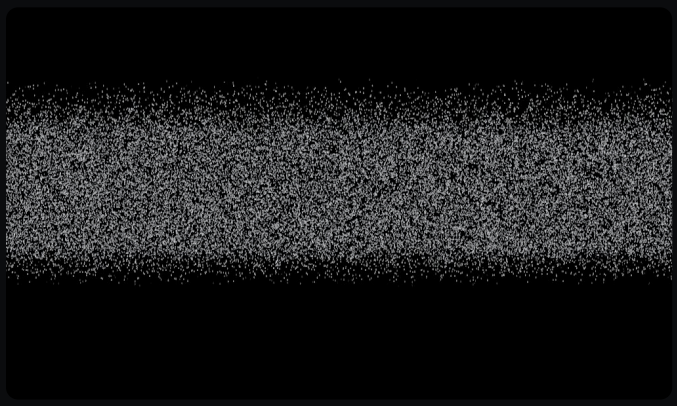
5 · Rendering & export

Part	Renders in	How
Snow / sand on objects	Any renderer (Corona, V-Ray, Arnold, Scanline, Vanguard Render)	Real geometry from the Vanguard Snow modifier. Nothing to tick.
Wetness, puddles, ripples	Any renderer	Weather Map inside the wrapped materials. Corona and V-Ray Multi/Sub materials are handled per sub-material.
Falling snow / rain / sand	GPU splats over any image	Render your frame, then **Add to the last render** — or **Over a sequence…** for an animation, pointing at your rendered frames.
Falling, in reflections	Any renderer	Set **Render as** → **Geometry**. Slower; use moderate counts.
Vanguard Render	Native	Reads the weather directly; lamps, fog and wet streets included.

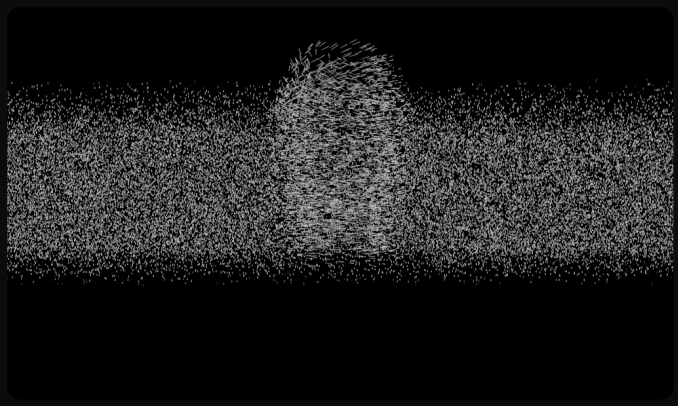
Typical settings

Still at 1920×1080: count 200k–2M, splats, collisions on, fog 2–6. Animation: same seed for every frame; render the beauty pass first, then *Over a sequence* with the same frame range. For a camera that moves through rain, keep the volume just around the camera's view — particles outside the frame cost time but add nothing.

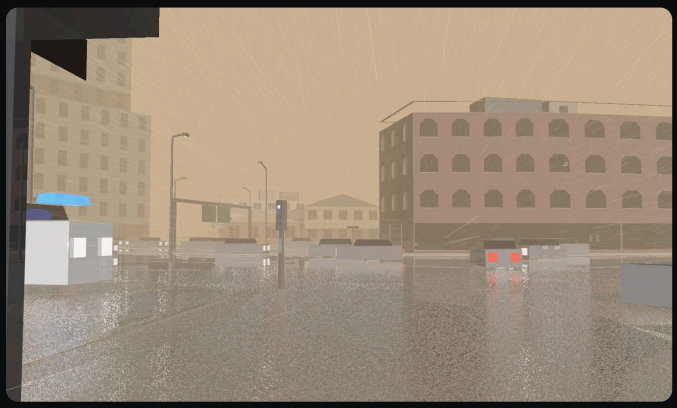
Export: *Bake snow to a mesh* turns the snow into an Editable Mesh you can export to FBX/OBJ or send to another app.



Rain without the tornado



Tornado wind on — only the area near the funnel changes



Sandstorm preset



Winter night in Vanguard Render

6 · Troubleshooting & FAQ

Problem	What to do
Snow is under a roof or missing from a roof	Press **Update shelter** after you move or add objects. Check *Shelter from* is *Whole scene*.
Snow is lumpy or slow on a huge scene	Raise **Detail** (a bigger edge length) and keep **Viewport** on *Coarser*. Winter night picks the detail per object for you.
Falling rain doesn't show in the render	In splat mode it is added after the render: press **Add to the last render**. To have it inside the renderer, set **Render as → Geometry**.
Rain passes through roofs / no splashes	Tick **Stop at the scene**. Rain only collides with objects inside or near the volume.
Materials turned white after applying	Use **Remove** to restore the originals, then apply again; Multi/Sub materials are wrapped per sub-material.
Only 2,000 falling particles	No licence is active: see Getting started → Activate.
The viewport is slow	Lower **Viewport %** or **Viewport max**; the render is not affected.
The volume is hard to select	Click anywhere on the sheep badge with the name; the whole badge is selectable.
The installer says files are in use	Close every 3ds Max and run the installer again as administrator.

FAQ

Does everything inside the volume get weather? Yes — press *Snow / wet / sand on everything inside this volume*, or choose *Apply to: Inside the weather volumes*.

Can I animate it? Yes. All values are animatable; falling particles are the same for the same seed and frame, so network rendering matches.

Is it a particle simulation? No caching is needed: every frame is computed directly, so you can scrub to any frame.

Do I need the GPU? Falling-weather splats and fast shelter use an NVIDIA GPU. Snow geometry and maps work without one.

7 · Requirements & licence

3ds Max	2024, 2025, 2026, 2027 (64-bit, Windows 10/11)
GPU	NVIDIA with CUDA, for the falling weather and GPU shelter
Renderers	Corona, V-Ray, Arnold, Scanline, Vanguard Render
Licence	One licence, one computer (bound to its Hardware ID). Moving to a new computer: contact support.
Support	support@vanguardfx.pro · vanguardfx.pro

