

“The events of 22 September 1992 really traumatised those who were hit by the floods. Many flood protection improvements have been made since then but we must stay alert.

The Water Boards (EPAGE Sud-Ouest du

Mont Ventoux and SMOP, for Sarrians) together with the local authorities have a key role to play in informing, and raising awareness about flood risks, especially with primary school children.

The main challenges are maintaining and rebuilding our dykes as part of the GEMAPI floods, rivers and wetland management plan as well as all other protective infrastructure.”

Anne-Marie Bardet, Mayor of Sarrians.

Stakeholders and post-flood management measures:

Following the disaster, several agencies and authorities joined forces to combat flooding in the local area.

Soon after 1992, the French government, allocated significant financial aid for urban planning (10 million euros for Vaucluse), accessible for people for building work to make their homes less vulnerable. As result, additional floors were built on some houses in Sarrians.

A Flood risk prevention plan was also introduced for the South West Mont Ventoux catchment. It was approved in 2007 and helps to stop building in the most flood-prone areas, while bringing in measures to make new buildings less vulnerable, especially raising floors levels.

The French government has also funded flood action programmes (PAPI) in the Ouvèze and South West Mont Ventoux catchments.

As for Sarrians, it has had a municipal major hazard database since 1999 and a local response plan which was published in 2012. In 2010, a guidebook focusing specifically on flood risks was also developed for the town council by the CPIE des Pays de Vaucluse ([free to download from www.apare-cme.eu/fr](http://www.apare-cme.eu/fr) under the “ressources” tab).

Responsibility for the GEMAPI management plan has been transferred from the CoVE (Ventoux Comtat Venaissin intermunicipal authority) to the EPAGE Sud-Ouest Mont-Ventoux water board, which developed two successive PAPI flood action programmes (2004 and 2016). The first highlighted the complexity of the catchment’s hydrological features and river systems, but also the need to have consistent river dyke management measures to prevent the sudden build-up of floodwaters at key points in the local infrastructure.

One of the main tasks has been to build a flood retention basin on the section downstream of La Mayre de Payan (La Blouvarde basin).



Houses with new upper floors at the Pruniers housing estate.

La Blouvarde flood retention basin.

Photo credit: EPAGE Sud-Ouest Mont-Ventoux

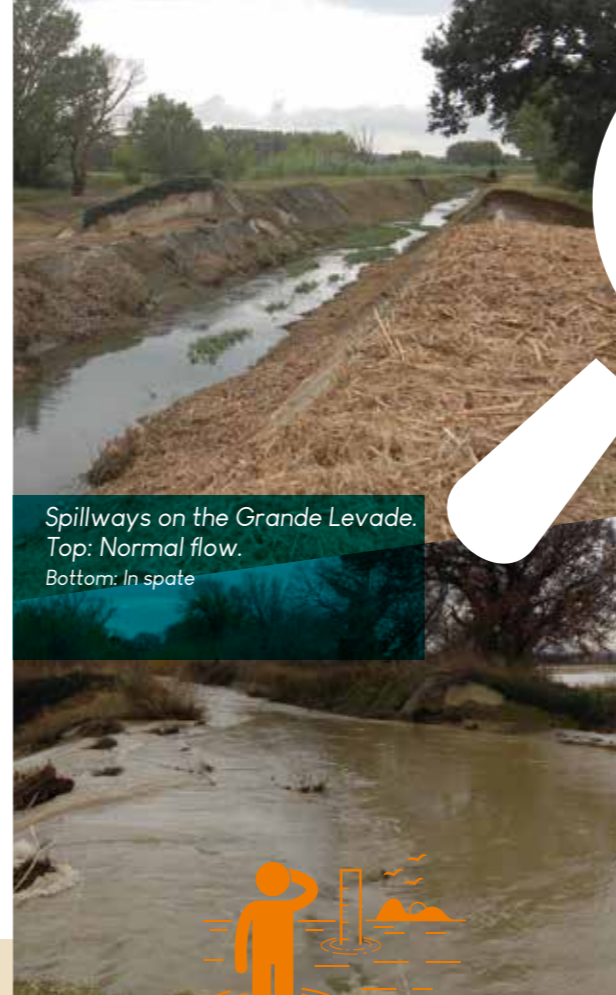


Flood-level marker in the “P’tit Mousse” Primary School playground.

24 flood-level markers have been installed in the catchment as a physical reminder of events, including two in Sarrians.

Finally, the Syndicat Mixte de l’Ouvéze Provençale joint development association, which also administers a PAPI flood action programme, has the main task of managing riverbed vegetation (multiannual restoration and management plan) and dyke maintenance (the dykes are currently being brought up to standard).

The EPAGE Sud-Ouest Mont-Ventoux water board carries out the same role for its area.



Spillways on the Grande Levade. Top: Normal flow. Bottom: In spate



SARRIANS 1992

Floods and the rural-urban fringe

Location: Sarrians sits in the centre of the Comtat Venaissin plain, with Mont Ventoux to the east, the Dentelles de Montmirail hills to the north, the Monts de Vaucluse hills to the south and the Rhône Valley to the west.

The gently sloping land around the town is bordered to west by the Ouvèze River (more than 3 km away from the town centre), while a network of rivers converge close to the centre forming the South West Mont Ventoux catchment. The largest of these is called the Brégoux, which is fed by various other rivers and streams from the Dentelles de Montmirail (La Salette and Le Lauchun, Le Seyrel and La Mayre de Payan). These watercourses cross built-up areas to the east of Sarrians.

The Brégoux then meets another river flowing from Mont Ventoux, Le Mède, to form the Grande Levade that skirts around Sarrians, to the south, before joining the Ouvèze, at Bédarrides.

Past floods and today's regions in the Mediterranean Arc

Troublesome levees.



Example of “levee” river profiles of the Salette and Lauchun as well as the Seyrel, at “Belle-Île”.

The river system crosses shallow sloping land where marshes naturally formed before they were gradually drained from the 11th century.

The streambeds were dyked to cut off the marshes and drain the land. Farmland could then be irrigated by gravitational methods, using sluice gates built into the dyke walls.

Emergency spillways also helped reduce pressure on the dykes when there was a danger of flooding. The dykes themselves were constantly raised. They shrank the wetland and kept rivers in their base-flow channels that were raised to a height above their normal streambeds and floodplains.

The dykes were consequently not designed to protect people and property.

Today, these levee-type rivers form a patchwork of compartments where rainwater and overflow collect, much like a basin, during periods of heavy rain.

Belle-Île is now a protected wetland reserve providing a home for wildlife such as beavers. Sarrians’ marshland past also lingers on in the names of some districts in the town, such as Les Palluns, Les Mians or La Feyessemianne.

Photo credit: EPAGE Sud-Ouest Mont Ventoux.

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From rural to rural meets urban

The old village of Sarrians once sat upon a hillock above the water, surrounded by marshes. From the 1950s, the town quickly expanded, growing from a population of almost 3,000 to 6,000 today.



Image credit: IGN / remonterletemps.ign.fr

Left, aerial photos of Sarrians from 1953 and right, from 2018. The red circle shows the old village centre, built on a hillock. The streambed of the Brégoux is shown in blue.

With **no major floods since 1951**, Sarrians grew to become a sizeable town with a range of infrastructure, including housing estates, business premises, roads and public utilities built in plots of land below the levees.

1992, a major flood event combined with rampant urban growth

22 September 1992 is a date chiefly known for the **disaster** that befell **Vaison la Romaine**, with the dramatic images of the Ouvèze surging under the Roman bridge still etched in many people's minds.

This was however part of a **much larger flood event** that hit North Vaucluse, Southern Drôme, the Department of the Ardèche and the North-East Gard.

The bulk of the rain fell on the Ouvèze river catchment, just upstream of Vaison la Romaine. It totalled **300 mm**, most of which fell in less than two hours in early afternoon, with peaks reaching **20 litres per m² in 6 minutes**. The river rapidly breached its banks and left a trail of destruction right up to its confluence with the Rhône, at Sorgues sur l'Ouvéze.

In Sarrians, on the left bank, the Ouvèze overflowed and submerged part of the town, while the worst of the floodwaters swamped lower lying land on the right bank.

It was primarily major flooding of watercourses in the **South West Mont Ventoux catchment** that seriously affected Sarrians, especially **the lowest-lying neighbourhoods**, such as **Mians**. These localities were actually flooded in **a matter of minutes** due to runoff that became trapped (total runoff water even reached 250 mm) and to a series of breaches in the dykes along the Brégoux River and the Grande Levade. The waters were up to **2.5 m deep** in some places as the Ouvèze was in flood downstream leaving the Brégoux nowhere to go, while floodwater in the Pruniers housing estate became trapped by **obstacles** such as the old railway embankment and the Boulevard du Comtat Venaissin road.



Historic floods:



The flooded supermarket car park, on 9 September 2002.

Photo credit: EPAGE Sud-Ouest Mont-Ventoux

This flood hit the Ouvèze River and the South West Mont Ventoux catchment and occurred long after that of November 1951, which was less intense and extended over a less built-up and freer-draining area. The last flood on this scale was the "Grand Désastre", on 21 August 1616, while the 1992 floods have been classified as a 100-year flood event (1 chance in 100 of being equalled or exceeded in any given year). The Ouvèze and the SW Mont Ventoux catchment have flooded many times over the years, such as in 1608, 1886, 1907 or 1924. Other less severe floods also followed that of 1992, such as in September 2002, December 2003 and December 2008.

Eyewitness accounts:

Guillaume Bonnet, AFP special correspondent, on-site in Sarrians, filed this report:

Jean-Pierre Ugo looks gaunt and worn-out. Through teary eyes, he tells how he saw his herd of 210 sheep die.

"When my sheep saw the flood wave, they froze with fear. I took shelter in a tree and shouted for help for two hours, while cars, cookers and tree trunks swept past below me. Then a helicopter came and saved me, hovering just a few centimetres above the water."

A local resident from the Pruniers housing estate takes us back, almost 40 years after:

"The floodwaters rose to 1.5 m in barely a quarter of an hour. The windows broke in the conservatory and I gashed my foot badly. I nearly had to have it amputated. Soon after, we got help from the government to add an upper floor to our house".

André Rey, Mayor of Sarrians in 1992:

"No one died but everyone was affected. The electricity supply is still partly cut off, two of the three schools are closed and we still don't know if we have safe drinking water".

A local resident from the Mians district:

"It's terrible. We had our house completely modernised three years ago. We've been struck by lightning twice and the garage caught fire but this is worse. We've had about as much as we can take".



The Vaucluse paid a heavy price

38 deaths: 33 in Vaucluse (mainly at Vaison la Romaine), four in the Ardèche and one Buis les Baronnies, in the Drôme. This total included ten foreign tourists trapped in local campsites.

63 towns and villages were flooded, 31 severely,

7,000 families affected, totalling 9,000 people, including 120 who lost everything and had to be rehoused with local residents,

153 houses and 80 shops were destroyed (2,134 needed repairs), Compensation amounting to **244 million euros** was paid out by insurance companies.

700 firms hit, including 330 small businesses

1,500 farmers experienced damage amounting to 22 million euros,

109 million euros worth of damage to municipal infrastructure,

50 km of roads, 500 km of ditches and **11 bridges** needed rebuilt,

The **Orsec disaster emergency plan** triggered the arrival of 300 emergency service workers, a regiment of army engineers, eight helicopters and two aircraft in the local area (**8,000 people were involved** until 15 October).

There were no casualties **in Sarrians** but three people died in Aubignan, on the banks of the Brégoux, just upstream of the village.

Damage to buildings amounted to almost 170,000 euros and 1.5 million euros for roads. 400 houses were wrecked and some had to be demolished.



The Pruniers housing estate on 22/09/92

Photo credit: Sarrians Town Council.



And now.

