

If you own property in Sacramento, the urge to dig is almost inevitable. Maybe you want to plant a shade tree to survive August, trench for a new sprinkler line, or carve out a footing for an accessory dwelling unit. Then somebody asks: "Wait, is it even legal to dig a hole in your backyard?"

The law does not care about your post hole for a small fence in the same way it cares about a 6-foot trench along the sidewalk. But there are clear lines you can't cross without permits, safety precautions, and a bit of homework.

I work around excavation and permitting in Northern California enough to have seen how fast a "simple hole" can turn into an emergency call to the utility company, a red tag from the city, or a worker in the hospital. Sacramento is no exception.

This guide walks through what is and is not allowed, how deep you can dig before the rules change, and where newer methods like vacuum excavation fit into the picture.

So, is it illegal to dig a hole in your Sacramento backyard?

Strictly speaking, no, it is not automatically illegal to dig a hole on your own property in Sacramento. There is no blanket law that says you cannot grab a shovel and start a planting pit.

The legal issues start when the hole is:

- Deep enough or long enough to become a trench or structural excavation
- Close to property lines, buildings, or public rights of way
- Interfering with utilities, drainage, or protected trees
- Part of construction that otherwise requires a permit

For many homeowners, routine gardening, small planting holes, and shallow irrigation trenches are allowed as long as they do not disturb [Sacramento Vacuum Excavation Bess Utility Solutions Sacramento](#) utilities and do not alter drainage in a way that affects neighbors or public property.

Where people get into trouble is assuming "my land, my rules" applies to any size or type of excavation. California law, Sacramento County codes, and City of Sacramento ordinances all place limits on grading, trenching, and structural work. On top of that, workplace safety rules apply the moment you bring employees or hired labor into the excavation.

The rule that matters before any other: call 811

The biggest practical and legal line is buried utilities. Before you think about what is the 4 foot rule in excavation or how deep you can dig without shoring, you need to think about gas, electric, telecom, and water.

In California, including Sacramento, state law requires you to notify the regional notification center - call 811 - at least two working days before you dig with power equipment. Hand digging is strongly recommended near marks, but even if you "only" plan to use a shovel, calling 811 is still the safest choice for anything deeper than shallow gardening.

Why this matters:

- Hitting a gas line can become a life-threatening explosion in seconds.
- Clipping a fiber optic cable or main electric line can trigger expensive repairs and liability.
- Utility owners will look very hard at whether you called 811 before they decide if you pay for damages.

It is not uncommon for “backyard” projects like putting in a fence, digging a 100 ft trench for sprinkler mainline, or augering for deck footings to cross unmarked or misremembered service lines.

Vacuum excavation companies are often brought in after a near miss. In my experience, a couple of days of planning with 811 is always cheaper than one emergency crew callout.

When a simple hole becomes “excavation” in the legal sense

Regulators think about excavation in terms of risk, not intent. Whether you are a contractor installing conduit or a homeowner digging for a koi pond, the soil and physics behave the same way.

Several thresholds matter in Sacramento and under general OSHA rules.

Depth and configuration

The moment you create a trench or hole that a person could enter, safety standards apply, even on private property. Federal OSHA regulations, which Cal/OSHA mirrors and often tightens, use a few depth markers that get tossed around on job sites:

- The “4 foot rule”: At 4 feet deep and beyond, you must have a safe way in and out of the excavation, such as a ladder, and you must check for hazardous atmospheres if there is any chance of confined space conditions.
- “How deep can you dig without shoring?”: In many soils, once you reach 5 feet deep, you need a protective system like shoring, shielding, or sloping unless a competent person determines the soil is stable and conditions are safe. Many companies treat 4 feet as their internal conservative line.
- “How deep can you excavate without shoring?”: Practically, for Sacramento’s mixed clays and silts, anything near 5 feet where someone enters the trench should be evaluated for a protective system, especially for narrow trenches.

The “19 inch rule” you sometimes hear on job sites refers to the maximum first rung height for ladder access, not to excavation depth. It still matters because if your trench or pit is deep enough to require a ladder, it must be set correctly so the first step is not an unsafe leap down into the hole.

Sacramento inspectors and Cal/OSHA take cave-ins seriously. Soil that holds for hours can fail in a second. If you hire workers, OSHA’s 3 most cited violations often include fall protection, hazard communication, and scaffolding, but trenching and excavation show up frequently in serious accident investigations.

Even if you are just a homeowner supervising a handyman, think hard before letting anyone climb into any excavation deeper than chest height without shoring or sloping.

Backyard projects that trigger permits or extra scrutiny

The City of Sacramento and Sacramento County both regulate grading and structural work. Local details change, but the patterns are consistent.

Here are common backyard efforts that often require permits or engineering review:

1. Retaining walls over a certain height
2. Pools, deep ponds, or large water features
3. New building foundations, garage or ADU pads, and major additions
4. Large-scale grading, such as cutting or filling to flatten a slope
5. Utility trenches that connect to public systems or cross easements

For example, you might be able to dig a shallow French drain by hand without a permit, but as soon as you cross under a sidewalk, approach the street, or connect to storm infrastructure, you are on the city's radar.

Similarly, a short garden wall may not need engineering, but a retaining wall designed to hold back several feet of soil is both a structural system and a life safety issue. It should be treated like a small building: engineered, permitted, and inspected.

If you are wondering "Is it illegal to dig a hole in your backyard?" the honest response is that [Sacramento Vacuum Excavation](#) the hole itself is rarely the problem. It is the purpose and impact that make it legal or not.

When vacuum excavation enters the picture

You will see more hydrovac and vac trucks all over Sacramento than a decade ago. Utility owners, cities, and contractors lean on them to reduce damage and injuries.

What is vacuum excavation?

Vacuum excavation uses high velocity air or water to loosen soil, then a powerful vacuum to suck the material into a debris tank. When water is used as the cutting medium, it is often called hydro excavation or "hydrovac", which answers the common question: what is the difference between hydro excavation and vacuum excavation?

In practice, people use "vacuum excavation" as the broad term, and "hydrovac" to describe systems that inject pressurized water to cut through tough soils. Air-vac systems use compressed air instead, which keeps the spoils dry and reusable but cuts slower.

On a crowded Sacramento street, utility owners often insist on vacuum excavation for potholing or daylighting lines because it dramatically reduces the odds of damaging a gas or fiber line.

How deep can vacuum excavation go?

Hydrovac units can reach impressive depths when set up correctly. Typical depth for safe, efficient work on urban projects falls somewhere between 15 and 30 feet, depending on:

- Hose length and diameter
- Available water and vacuum power
- Soil type and groundwater

Under ideal conditions, some units can go considerably deeper, but production slows as lift height increases. Practical limitations usually come from traffic control, spoil handling, and how long you can occupy a lane, not from physics alone.

If you are thinking in terms of "How deep can vacuum excavation go?" for a backyard project, the real constraint will be budget and access. A full-size vacuum excavation truck is overkill for a simple planting bed, but it can be perfect for safely exposing a gas line right next to the house.

How much does vacuum excavation cost?

Costs in the Sacramento region move with fuel prices, wages, and demand. For many hydrovac contractors, pricing is based on:

- Hourly rates for a truck with crew
- Minimum callout times (often four hours)

- Standby charges if the crew must wait on your site

Typical vacuum excavation cost ranges I see in Northern California are in the ballpark of a few hundred dollars per hour for a full hydrovac rig with operator and helper. Smaller trailer vac units are cheaper but have less reach and capacity.

“How much does it cost for a vac excavation” or “how much is a vac ex to buy” are very different questions. Buying a good new vacuum excavation truck can run from the low hundreds of thousands into the high six figures, depending on size and features. That capital cost, along with maintenance, insurance, and trained operators, is why day rates feel high to homeowners.

If you are planning a project and wondering “how much would it cost to excavate 10 acres of land” or “how much to excavate 200 cubic yards” with vac ex, bear in mind that vacuum systems are not designed for bulk earthmoving. An excavator or dozer typically handles that, while vac ex handles the precise, utility-sensitive sections.

How much can a vac ex excavate in a day?

Production rates depend heavily on soil conditions and job access. For potholing utilities in typical Sacramento clay, a hydrovac crew might expose dozens of small test holes in a day. For continuous trenching, you might see tens of linear feet per hour at typical utility depths.



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So, “how much can a vac ex excavate in a day” is best answered with a range: from a handful of yards in very hard or congested areas, to several dozen cubic yards in softer soils with easy access. Vacuum excavation is about precision and safety, not raw volume.

Safety, training, and who can operate what

Even on private land, safety rules and training requirements matter more than most homeowners realize, especially once you hire help.

What kind of training is required for vacuum excavation?

Under OSHA and Cal/OSHA, employers are required to train workers in the safe operation of equipment, recognition of hazards, and specific work practices. For vacuum excavation crews, good contractors provide:

- Equipment-specific training on the hydrovac or air-vac unit
- Trenching and excavation safety, including the 4 foot rule and sloping/shoring options
- Traffic control for work in streets or near boulevards
- Confined space awareness and utility damage prevention

There is no single nationwide “vacuum excavation license,” but many companies require documented training, proficiency checks, and in some cases, third-party courses for their operators.

Do you need a CDL or tanker endorsement for a hydrovac truck?

Most full-size vacuum excavation trucks exceed the weight thresholds for a commercial driver’s license (CDL). In practice, yes, a CDL is required for hydrovac jobs that involve driving the rig on public roads.

Whether you need a tanker endorsement depends on how your state classifies the debris tank and how the truck is registered. Many hydrovac units carry large volumes of water or slurry, and companies often require a tanker endorsement so they are covered regardless of interpretation. It is a question worth asking if you are hiring a contractor or starting a small vac ex business.

“Is a CDL required for hydrovac jobs?” is almost always answered with “yes” for the driver, even if the helper does not need one.

Excavator operators, age, and pay

Sacramento’s construction market has pushed wages up for skilled heavy equipment operators. The highest salary for an excavator operator in California can reach into the high five figures or low six figures annually for union positions with overtime, specialized skills, and night or hazard work.

Is 50 too old to become a heavy equipment operator? Not necessarily. I have seen people switch careers in their 40s and 50s, provided they are physically able to climb, lift, and tolerate outdoor work. The key is getting proper training.

What certifications do you need to run an excavator? Typically:

- Employer or union training and sign-off
- Equipment-specific familiarization
- For some public works or large contractors, completion of formal operator training programs

There is no universal excavator license for all situations, but on big projects, especially public ones, operators with documented training or union cards have a clear advantage.

Trench depth, rules of thumb, and OSHA “rules”

The keyword list around excavation is full of “rules” with numbers: the 5 4 3 2 1 rule for excavation, the 3/4/5 rule for excavation, the 35 foot rule, rule 1413 for excavation. On job sites, these get repeated in different ways, sometimes inconsistently.

A few useful realities:

- OSHA’s trenching standard focuses on depth thresholds, soil classification, and protective systems, but does not use catchy numeric names in the regulation text. Many “rules” are training aids created by instructors.
- How deep can you dig without shoring is not a one-size answer. Soil type, surcharge loads, water, and trench width all matter. In Sacramento’s clays, being conservative is wise.
- The 35 foot rule sometimes refers to ladder requirements for working at heights or maximum spacing in some fall protection guidance, but it is not a universal excavation law.

The practical takeaway on a private property project: if anyone is entering the trench and it is beyond waist deep, treat it as a significant hazard. Shoring, shielding, or sloping, plus a competent person to inspect conditions, are not optional luxuries.

OSHA’s 5 basic requirements around excavations can be roughly summarized as: competent supervision, protective systems for deep cuts, safe access and egress, protection from falling materials, and inspection of conditions. When people ask “What are the 5 OSHA requirements?” in this context, trainers are usually referring to variants of that set.

Cost side: excavators, hourly rates, and job pricing

If your project goes beyond backyard shovel work, you will quickly meet excavators and their operators, or you might even consider buying a small machine.

What does excavation cost per hour?

In the Sacramento market, you tend to see equipment with operator priced hourly. For a mid-size excavator, per-hour excavation cost might land in a band from roughly low to mid hundreds of dollars, depending on:

- Machine size (mini excavator vs 20-ton machine like a Cat 320)
- Operator skill and union status
- Job conditions, access, and travel

“How much does an excavator excavate in one hour?” or “how long does it take to dig a 100 ft trench?” are practical questions, but the honest answer is “it depends heavily on soil and obstructions.” In clean, soft ground at 2 to 3 feet deep, a mini excavator might dig a 100 ft trench in a couple of hours. In hardpan or roots, it can stretch much longer.

The common habit of dividing by 27 for cubic yards comes from the fact that a cubic yard is 27 cubic feet. When you estimate volumes for footing excavations, pool digs, or grading, you calculate cubic feet and then divide by 27 to convert to yards, which most excavation pricing uses.

How to price out excavating jobs

Contractors generally combine:

- Mobilization costs
- Machine and operator hourly rates or production-based rates

- Hauling and disposal of spoils
- Shoring, traffic control, and safety costs if needed

For a simple backyard pad, someone might quote a flat amount to excavate and compact 1000 sq ft to a certain depth, because “what is the cost of 1000 sq ft” is easier to explain to a homeowner than “x cubic yards at y dollars each.”

Large tracts, like wondering how much would it cost to excavate 10 acres of land, require real survey work, grading plans, and cut/fill calculations. Those are not back-of-the-envelope numbers for a single blog page.

Soil conditions, moisture, and DIY digging tricks

Homeowners often ask whether it is better to dig a hole when the ground is wet or dry. In Sacramento’s climate, there is a balance.

Slightly moist soil can be easier to cut and hold shape. Completely dry summer clay can be rock hard on the surface, then crumble once you break through. Very wet soil, especially after heavy winter storms, becomes unstable, slippery, and more prone to collapse.

If you are hand digging, light watering a day ahead can help, but you do not want a saturated mess in any trench someone will enter.

“Can I dig a trench with a pressure washer?” is an occasional internet idea. High pressure water can cut grooves in soil, but without a proper vacuum system to remove spoils and control erosion, you will usually create a muddy, uncontrolled channel that undermines nearby ground. Dedicated hydro excavation units have the pressure, flow, and containment to do this safely; a consumer pressure washer does not.

Excavators, bulldozers, and “types” of machines

On real projects that move from backyards to boulevards, you usually see a mix of machines.

What are the three types of excavators? In casual conversation, people might lump them as mini excavators, standard crawler excavators, and wheeled excavators. In practice, manufacturers categorize dozens of sizes and configurations.

Is a Cat 320 a 20 ton excavator? Roughly, yes. The Cat 320 class sits around that 20-ton operating weight range, which is a common size for urban infrastructure and larger commercial sites.

What are the four types of excavation? Geotechnical texts often talk in terms of cut types like trench, borrow, bridge, and channel, while civil plans distinguish between topsoil stripping, bulk cut, trenching, and structural excavation. The exact labels matter less than matching the machine and method to the task.

People sometimes ask what is stronger than a bulldozer. The question is not entirely fair because bulldozers specialize in pushing and rough grading, while excavators specialize in digging and lifting. For heavy ripping and pushing, large dozers win. For deep utility trenches along Sacramento boulevards, excavators or vac ex units are stronger in the only way that matters: precision and reach.

Odd keyword cousins: labor, birth, and “vacuum delivery”

Some of the phrases you might run across in search results near excavation have nothing to do with digging.

“Is vacuum delivery painful”, “How risky is vacuum delivery”, “What is the 5 3 1 rule for labor”, and “What is the rarest hour to be born” all belong in obstetrics, not construction. They refer to assisted childbirth and labor contraction timing, not hydrovac services. Similarly, a “tanker endorsement” for a truck is entirely separate from hospital discussions of labor rules.

If you are searching fast and skim past context, it is easy to confuse hydro excavation vacuum trucks with medical vacuum devices. One digs in dirt, the other belongs in a delivery room. Keep them separate.

Practical checklist: when your backyard dig is simple, and when it is not

To keep yourself out of trouble in Sacramento, it helps to sort projects into “truly simple” and “needs more thought.”

Here is a short, practical list of times when you should assume you need permits, professional help, or both:

1. Any excavation deeper than about 4 feet where a person will enter
2. Any trench or footing near property lines, retaining walls, or building foundations
3. Any work in front yards near sidewalks, driveways, or the street
4. Any pool, large pond, or structure foundation
5. Any project involving hired workers exposed to excavation hazards

And here are cases where, with 811 clearance and common sense, most homeowners in Sacramento can safely proceed without formal permits:

1. Shallow planting holes and small garden beds
2. Minor landscape contouring that does not alter drainage patterns
3. Short, shallow trenches for drip irrigation in planting areas
4. Fence post holes away from utilities and property lines
5. Small nonstructural features like prefabricated garden ponds set above grade

These are broad rules of thumb, not legal advice. Sacramento’s exact rules evolve, and specific neighborhoods have overlays, floodplain rules, or tree protection ordinances that change the picture.

Backyards to boulevards: connecting the dots

By the time a project reaches the boulevard, with lane closures and detours, no one questions whether rules apply. The surprises almost always start in the backyard: a trench slightly deeper than planned, a hole slightly closer to the property line, a gas line “that could not possibly be there.”

Vacuum excavation, well-trained operators, and a solid grasp of OSHA excavation principles are simply the modern response to those risks. The tools differ between a homeowner with a shovel and a hydrovac crew uncovering a 16-inch gas main, but the soil and gravity have no idea who holds the handle.

If you remember nothing else for Sacramento:

Call 811 before you dig. Treat anything deeper than chest height as a serious excavation. Ask the city before you reshape grades, build walls, or approach the sidewalk. When in doubt near buried utilities, consider vacuum excavation rather than blind digging.

Do those things, and you can enjoy your backyard projects without an unexpected visit from a utility repair crew or a city inspector, and let the heavy hydrovac rigs and big excavators handle the boulevards where they belong.