



CITY OF DIXON  
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## Residential Pool/Spa Requirements

### Submittal Checklist: Paper or Portal (DCAP) [City of Dixon, CA](#)

1. Submit plot plan showing the following:
  - Actual setbacks from property lines, house and other structures, and
  - Location of a GFCI receptacle between 10 and 20 feet of the water's edge
  - Location and size of electrical panel
  - Photograph(s) of main panel without deadfront in place to view wiring, circuits, etc.
2. Submit signed/sealed copies of steel schedule for pools or gunite spas.
3. Submit copy of the design plans (pool plans) or manufacturer specifications for the spa/hot tub/dough boy with the wet signature of the person responsible for the plans. Spa information is to include electrical and/or gas requirements. Manufactured spas shall be listed.
4. Provide the following information;
  - Existing electrical service equipment (panel) size, and provide load calculations to verify capacity (if less than 200 amp service provided at dwelling)
  - Pool equipment schedule including manufacturer's specifications and listing information.
  - If a heater is to be installed, provide gas piping size and location. (Pool/spa cover required)
  - If a solar heater is to be installed, provide manufacturer's installation instructions.
5. An encroachment permit from the Engineering Department is required prior to issuance of a building permit for in-ground pools. Encroachment Permits may be obtained from the Dixon Engineering Department. [Welcome to the Official Website of the City of Dixon, CA - Applications, Permits & Fees](#)

### **Plumbing, Mechanical & Energy Requirements** **Based on the California Mechanical Code (CMC), the California Plumbing Code (CPC), and the California Energy Code (CEC T-24)**

- 1) Backflow prevention required at water supply per the California Plumbing Code 603.5.21

- a.) Manual fill: use AVB (Atmospheric Vacuum Breaker)
- b.) Auto fill / auto chlorinator: use (Reduced Pressure Principle Backflow Preventer)

**NOTE: If your pool is equipped with an auto fill device then a test certification document will be required. Please provide a valid test certification of the RP, by an CA-NV AWWA Backflow Prevention Assembly Tester, with a current gauge calibration certificate by final inspection.** For your convenience a list of certified backflow testers can be found here [2024 Backflow Testers List.pdf \(cityofdixon.us\)](#)

2) The swimming pool or spa shall either have at least two circulation suction outlets per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the suction outlets, or be designed to use alternatives to suction outlets, including, but not limited to, skimmers or perimeter overflow systems to conduct water to the recirculation pump. The circulation system shall have the capacity to provide a complete turnover of pool water, as specified in Appendix C1 of the California Residential Code (Title 24 of the California Code of Regulations). HSC 115928

3) Suction outlets shall be covered with antientrapment grates, as specified in the ANSI/APSP-16 performance standard or successor standard designated by the federal Consumer Product Safety Commission, that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.

4) Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in subdivisions (a) and (b) shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.

5) Whenever a building permit is issued for the remodel or modification of an existing swimming pool, toddler pool or spa, the permit shall require that the suction outlet or suction outlets of the existing swimming pool, toddler pool or spa be upgraded so as to be equipped with antientrapment grates, as specified in the ANSI/APSP-16 performance standard or a successor standard designated by the federal Consumer Product Safety Commission.

6) At least 36" of pipe between the filter and the heater to allow for future addition of solar heating required. Per California Energy Code (CEC T-24)

7) All pools constructed with pool heaters require a pool cover. Per California Energy Code (CEC T-24)

8) A mechanical draft venting system of other than direct vent type shall terminate at least 4' below, 4' horizontally from or 1' above any door, operable window, or gravity air inlet into any building. The bottom of the vent terminal shall be located at least 12" above grade. Per CMC 802.8.1

9) An ON-OFF switch mounted on the outside of the heater for easy access

10) A permanent weatherproof plate or card, easily readable, giving instruction for the efficient operation of the swimming pool.

### **Swimming Pool Electrical Requirements Based on the California Electrical Code (CEC)**

1) All metals within 5' horizontally of the inside walls of the pool and 12' vertically of maximum water level of pool to be bonded. Per CEC

2) Receptacles that provide power for water pump motors or for other loads directly related to the circulation and sanitations system that are 125v or 240v whether by receptacle or direct connection shall be provided with GFCI protection. They shall also be located at least 10' from the inside walls of the pool, or not less than 6' from the inside walls of the pool if they meet all of the requirements of the CEC

3) Where a permanently installed pool is installed at a dwelling unit, no fewer than 1 – 125 volt, 15 or 20 amp receptacle on a general purpose branch circuit shall be located not less than 6' from and not more than 20' from the inside wall of the pool. Per CEC

4) Equipotential Bonding Grid: The parts specified in 680.26(B) shall be connected to an equipotential bonding grid with a solid copper conductor, insulated, covered or bare, not smaller than 8AWG or rigid metal conduit of brass or other identified corrosion resistant metal conduit. Connection shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper or copper alloy. The equipotential common bonding grid shall extend under paved and unpaved surfaces for 3' horizontally beyond the inside walls of the pool and shall be permitted to be any of the following:

4.1) Structural reinforcing steel. The structural reinforcing steel of a concrete pool where the reinforcing rods are bonded together by the usual steel tie wires or the equivalent

4.2) Bolted or welded metal pools. The wall of a bolted or welded metal pool

4.3) Alternate means. This system shall be permitted to be constructed as specified (A)-(F)

A.) Materials and connections. The grid shall be construction of minimum 8AWG bare solid copper conductors. Conductors shall be bonded to each other at all points of crossing. Connections shall be made per CEC.

B.) Grid structure. The equipotential bonding grid shall cover the contour of the pool and the pool deck extending 3' horizontally from the inside walls of the pool. The equipotential bonding grid shall be arranged in a 12" x 12" network of conductors in a uniformly space perpendicular grid pattern with tolerance of 4".

C.) Securing. The below grade grid shall be secured within or under the pool and deck media. Per CEC.

D.) Swimming pools made of fiberglass and vinyl shall be considered nonconductive.

E.) All metal parts used to secure vinyl pool liners shall be bonded to the equipotential bonding grid.

F.) An intentional bond of 9" sq shall be installed in contact with the pool water of nonconductive swimming pools per CEC

### **Fencing, Barriers, and Safety Regulations**

Swimming Pool Safety Act 2025 California Residential Code Appendix C1

#### **Swimming Pool Safety Act**

California Health and Safety Code section 115920 through 115929

When a Building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa at a private single family home, the respective swimming pool or spa shall be equipped with at least two of the following seven drowning prevention safety features.

(1) An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home.

115923. An enclosure shall have all of the following characteristics:

- (a) Any access gates through the enclosure open away from the swimming pool, and are self-closing with a self-latching device placed no lower than 60 inches above the ground.
- (b) A minimum height of 60 inches.

- (c) A maximum vertical clearance from the ground to the bottom of the enclosure of two inches.
- (d) Gaps or voids, if any, do not allow passage of a sphere equal to or greater than four inches in diameter.
- (e) An outside surface free of protrusions, cavities or other physical characteristics that would serve as handholds or footholds that could enable a child below the age of five years to climb over.

(2) Removable mesh fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.

(3) An approved safety pool cover in compliance with standard ASTM 1346-91

(4) Exit alarms on the private single-family home's doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as a repeating notification that "the door to the pool is open." Any/all garage doors that provide direct access to the pool and/or spa shall also be equipped with a listed UL 2017 alarm.

(5) A self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor on the private single-family home's doors providing direct access to the swimming pool or spa.

(6) An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning prevention safety feature.

(7) Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features set forth above and has been independently verified by an approved testing laboratory as meeting standards for those features established by the ASTM or the American Society of Mechanical Engineers (ASME).

### **Fencing Requirements:**

1) Closely spaced horizontal members:

a.) Where the barriers is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45", the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75" in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75" in width.

2) Widely space horizontal members:

a.) Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45" or more, spacing between vertical members shall not exceed 4". Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75" in width.

3) **Vehicle access gates: Shall not be allowed to be used as a required barrier as required in item (1) above 115923**

## **Notice to Pool Contractors**

### **ADDITIONAL DESIGN REQUIREMENTS not included on Swimming Pool Plan Requirements:**

- ☐ No swimming pool, spa, or any body of water having a depth of more than 18 inches shall be located in a required front or side setback nor less than five feet from a property line, measured to the outside edge of water.
- ☐ Accessory mechanical equipment and related structures shall not be located within 15 feet of a bedroom window on an adjacent lot.
- ☐ Pool structure must not encroach into any easement(s).
- ☐ Venting for gas pool heaters shall terminate not less than 4' from any opening or air inlet to the building.
- ☐ Clearance from combustibles to pool heaters shall be per manufacturer's specifications.
- ☐ Pools must meet the requirements of the 2021 International Swimming Pool and Spa Code (ISPSA), the California Electric Code (CEC) and the California Building Code (CBC).

### **CONSTRUCTION REQUIREMENTS:**

- ☐ It will be the responsibility of the pool contractor to keep all streets, curbs, gutters and sidewalks clean and free of dirt, concrete and other debris, used in the construction of swimming pools.
- ☐ Construction materials such as dirt, sand and cement shall not be washed into the gutter or storm drain.
- ☐ The City of Dixon Grading Ordinance and the California Penal Code Section 374.3(b) prohibit dumping of material on public or private property within the City limits and without the consent of the owner. Violators will be subject to fines.
- ☐ All fences and gates must be in place when work is completed daily so pool is not accessible by anyone other than property owners.
- ☐ All broken sidewalks must be fully repaired prior to the final inspection.
- ☐ No pool shall be filled with water before the pre-plaster inspection is approved.
- ☐ The grading must be complete prior to final inspection. This includes 2% drainage away from the house and all drainage sloping to the street. Note: It is the responsibility of the contractor to see that the grading is completed. All homeowners will be referred back to the contractor for clarification.

Due to liability reasons, the City of Dixon will not make any inspections unless there is an adult at least 18 years old present or an authorizing note is left on the front door allowing the inspector to enter the rear yard. All animals must be restrained!

## Inspection Process

The City of Dixon is enforcing the following field inspections on all swimming pools and spas. Following are some basic guidelines.

### **1. Pre-gunite:**

- ☐ All reinforcement is in place
- ☐ Underground electrical conduit is in trench.
- ☐ Bonding to pool, equipment pad, light niche, all metal objects within 5' of pool
- ☐ Gas piping in trench and on test
- ☐ Water lines on test at 35 psi.
- ☐ **Barriers required at this time for vinyl and fiberglass pools**

### **2. Pre-deck:**

- ☐ All forms in place with drains installed
- ☐ Bonding of all metal objects within 5' of water's edge (handrails, ladders, umbrella pockets)
- ☐ Min. slab thickness with no exposed pipes or conduit (wrap if necessary)
- ☐ Protect PVC at equipment slab

### **3. Pre-plaster - Prior to filling with water:**

- ☐ All Safety devices must be installed and operating properly:
  - Pool barrier / alarms / self-closing doors
  - Self-closing, self-latching gate(s) must swing away from pool
- ☐ "Listed" potting compound in all light niche fixtures.
- ☐ Equipment installed and ready for operation
  - Bonding in place
  - Pool sub panel completed
  - Correct breaker size at main panel for equipment installed
- ☐ All back- flow devices installed
  - AVB on supply line (Reduced Pressure Principle Backflow Preventer for Pools with auto-fill)
  - Back-flow preventers on hose bibs
- ☐ Bonding of all metal objects within 5' of pool

### **4. Pool Final:**

- ☐ Final electrical
  - Pool lighting
  - GFI's
  - Bonding of all metal objects within 5' of pool
- ☐ Safety glazing where required
- ☐ Check sidewalks for damage from equipment access
- ☐ Lot drainage to fall towards street

If the pool is equipped with an autofill device then a test certification document is required. Please provide a valid test certification of the RP, by an CA-NV AWWA Backflow Prevention Assembly Tester, with a current gauge calibration certificate by final inspection.

For your convenience a list of certified backflow testers can be found here [2024 Backflow Testers List.pdf \(cityofdixon.us\)](#)

**Please be ready for the inspection desired before scheduling an inspection request.**