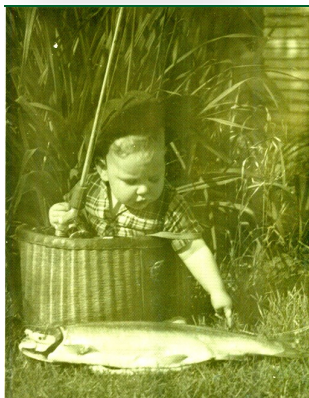


HEADTOWER NEWS

BOOMTOWN MUSEUM NEWSLETTER

by the Shasta Lake Historical Society

Volume 22 #64 April 2025



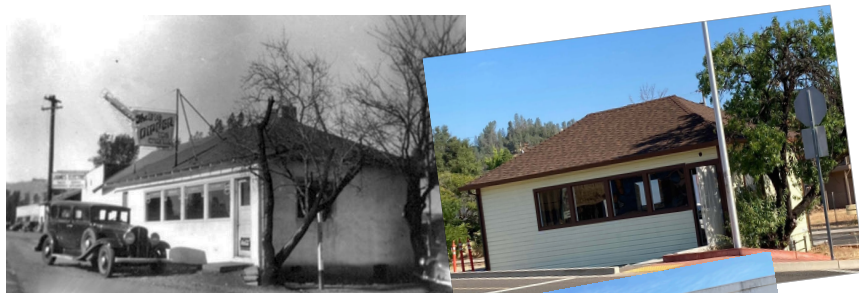
It must be Spring right around the corner as we see the ballparks filling up with leager young faces, California poppies and daffodils blooming in our gardens and on the hillsides, and the Girl Scouts selling cookies! Fishermen and women heading for the lake, bulbs and seeds being planted for summer flowers and young sprigs of poison oak popping up and sending their cheer. *"Leaves of three, let them be!"*

Brings back thoughts of what it was like before we became a city or what it must have looked like when the Boomtowns were just emerging. We have chosen to focus our museum displays on the businesses of early days.

What businesses were here? Do any of the old buildings still stand? Where were they located? Do you have memories and/or information of those places? If you do, do you have any photos to share with us? Our theme is "Then and Now" for the current displays and is a catalyst to our vision of a walking/driving tour, with a QR code linked to the photos & history of our city. BELOW ARE SOME SAMPLES.

Our THANKs to the local businesses who support us! Shop local!

THE BIG DIPPER
c1938 - to today



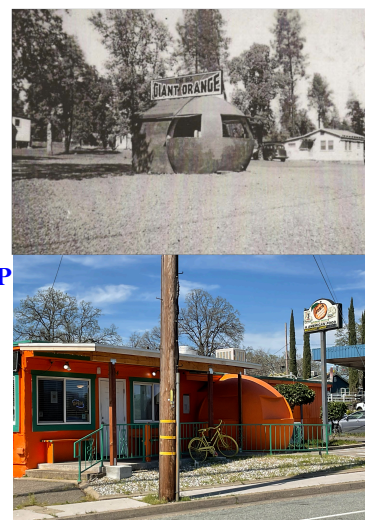
FROM
MIKE'S MARKET,
c1950 TO THE
DOLLAR STORE



FROM
BARGER'S
BOAT SHOP
c1940 TO
THE PIZZA
FACTORY



THE GIANT ORANGE c1945
today - Joe's Giant Orange



We try to be accurate but we are not liable for any additions, omissions, errors and/or corrections that may occur in this publication. Any photographs or material used may not be reprinted or reproduced without contacting us for permission of use. Thank you, Darlene V. Brown, Editor and Pete Droesch, Assistant Editor.



CELEBRATE 80 YEARS WITH US! FRIDAY, JUNE 20TH, 2025

SHASTA LAKE VISITORS CENTER
16349 SHASTA DAM BLVD. SHASTA LAKE
10AM - SHASTA LAKE BUSINESS MIXER
11 AM - PROGRAM OF CELEBRATION*
NOON - OPEN HOUSE W/REFRESHMENTS
1 & 2 PM - SPECIAL DAM TOURS

CITY OF SHASTA LAKE
4 - 6 PM - OPEN HOUSE IN THE BOOMTOWN MUSEUM
1525 MEDIAN AVE (HONORING THOSE DAMWORKERS)
6 PM - CONCERT IN THE PARK - CLAIR ENGLE PARK

* Included will be the Shasta Lake Historical Society presenting a plaque honoring the 80th celebration of the "last bucket poured" on Shasta Dam.

GLEANINGS from the Internet - Fred Baker

SURE? Are you SURE? Are you confident that the information you retrieve from the internet is correct or even close to the truth? The correctness of the internet is, in fact, only as correct as the submitting agent! I wish that fact was not true, but facts are stubborn things. I have been led down that path, finding it tasty but wrong as wrong could be.

I am involved in fact-finding efforts concerning the "Shasta Dam" near Redding, California. I wrote down my question, so I would be sure that each of the four search engines on my computer and the one on my phone would be looking for the same answer. To my surprise, all the returns did not match. I was rather confused.

The question was not complicated or ambiguous. ***Here is the question: "Among all the Dams in the United States, where does Shasta Dam rank?"*** One submission did happen to include the letters "NID". What was this? This was my first encounter with this term. Now that I know what these letters mean, I was not surprised! "N" is for National, "I" is for inventory, and of course, "D" is for dam! {National Inventory of Dams}. The U S Department of the Interior (Bureau of Reclamation) oversaw all the waterways and with the Army Corp of Engineers developed the NID. The agency has more than 70 criteria to identify its projects at any given time.

Here are the facts describing the inventory of dams and data in the United States of AMERICA

91,827 total Dams; 63 years is an average age; 76 High Hazard potential for failure with EAP (Emergency Action Plan); 3% produce Hydropower; 5% are Federally Regulated and 71% are State Regulated .

Here are the facts describing the inventory of dams in the State of California

1,531 total Dams; 75 years is the average age; 90% High Hazard potential with EAP; 21% produce Hydropower; 31% Federally Regulated and 85 % State Regulated Dams.

Now what happened to our original question? Information is everywhere, and plenty of it. It has become clear that the original source for reliable information is the place to go. The internet is fun and exciting, but it will leave you wanting more, and more. My [more] was and is Shasta Dam, [CA10186], located north of Redding, California. Three rivers feed Shasta Lake which is held behind the Dam, the Sacramento River, the McCloud River, and the Pitt River. Shasta Dam began to store water in 1944 due to the impounding of the Sacramento River. The purposes were Hydroelectric, irrigation, navigation, recreation, flood control and water supply.

NID information concerning Shasta Dam [CA10186]: Height 602ft, at present. Originally designed to stand 700 ft. The hydraulic height of a Dam, in feet, is defined as the vertical difference between the maximum design water level and the lowest point in the original streambed. Dam type: Concrete, Gravity. Storage 4,661,860 Acre ft. Year completed 1945. Latitude 40.7186 and longitude 122.4192. Surface Area 30,000 Acres. The elevation of the Lake is 1,067 ft. The Crest Length of the structure measures 3,500 ft. Depending on your purpose and interest level, many, many more facts can be calculated and gathered.

And the answer to the question is: Shasta Dam is officially rated #2 [in total cubic yards of concrete] and that magnificent structure stands tall in our backyard and on June 20th, celebrates 80 years since the last bucket was poured!

WORKING FOR THE BUREAU - Gloria Halcomb (4-8-1928)

This is what my mom wrote many years ago about working at Shasta Dam:

"I was hired as a Clerk Typist title because they didn't have a Telephone Operator rating. So, I worked the switchboard and typed up all the outgoing letters for the Head Mechanical Engineer, Bill McCrystal, Electrical Engineer Rock Atkinson, and Frank Lord."

"Later they installed a full-sized large PBX Telephone Switchboard where I handled all calls incoming and outgoing from Keswick and Shasta Dams, inter-office calls, Toyon office calls, and Contractor calls. So, I was designated a full Telephone Operator then with more pay and the only one there for it all! I loved it! I never would have quit if it hadn't been that my husband, Carrol, wanted me to be home when our son, Greg, arrived."

"My office was on the second floor of the Powerhouse next door to the Engineer's offices. I even got calls from Washington D.C. Department of Interior for the Engineer's and Contractors. I'd have to run down and find them if they weren't in their offices."

"Something different every minute."

My dad, Carrol Halcomb, worked at Shasta Dam for 20 years as an Inspector starting during the construction. We lived in the government housing in Toyon. The photo is my sister, Vickie and I, about 1955.

A little sideline: Howard Colby, the official photographer during the construction of the dam, later was my sophomore English teacher at Enterprise High.

by Greg Halcomb

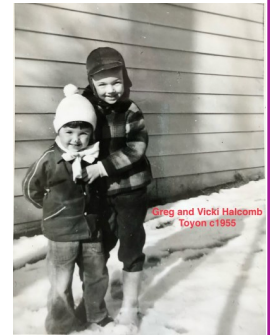
HAPPY 97TH BIRTHDAY GLORIA



Gloria Halcomb c1943
Worked as switchboard operator
Powerhouse at Shasta Dam



Gloria and Carrol Halcomb
Carrol worked as an
Inspector on Shasta Dam
for 20 years.



Greg and Vicki Halcomb
Toyon c1955

Is it Concrete or Cement in Shasta Dam?

In the construction of Shasta Dam, you will find the words Concrete and Cement used interchangeably, however, they are different. Cement is a component of concrete. Concrete is a mixture of cement, gravel or aggregate, and water.

Concrete hardens through a chemical process known as curing. It does not "dry" through evaporation. Instead, when water is mixed with cement, it forms a paste. This paste undergoes a chemical reaction called hydration, which releases heat in an exothermic reaction. The paste coats gravel, which serves as a filler material.

Concrete can be mixed by hand by using a shovel or hoe or by a mechanical mixer. By hand is OK for small projects, a gas or electric-powered mixer works for medium ones, and a mixer truck for big projects. Shasta Dam under construction had five, 4 cubic yard mixers at the base of the head tower. The mixers dumped the concrete into an 8 cubic yard bucket. It was carried to the dam site by overhead cableways and dumped into forms called a "block" or "lift" that were 50 ft x 50 ft x 5 ft high.

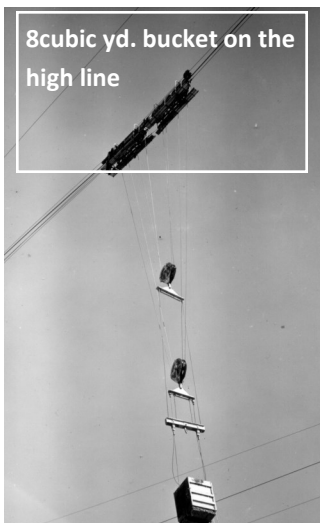
Concrete is measured by Volume which is 3-dimensional - length, width, and height. One cubic yard $3 \times 3 \times 3 = 27$ cubic feet. *Some quick math:* The 50x50x5 form on Shasta Dam is 125,000 cubic feet divided by 27 cubic feet or 462 cubic yards.

Now divide 462 cubic yards by an 8 cubic yard bucket – *the result is that it took 58 buckets to fill each block; Shasta Dam had 780,750 buckets of concrete placed.* The placement was carried out by the Head tower, the cableways, and the seven tail towers.

The ingenious cable-way system was devised by Frank Crowe, the General Superintendent for the construction of Shasta Dam, and proved to be a very efficient system for concrete placement.

The alternate method used by Crowe on the Grand Coulee Dam was by traveling cranes that ran on tracks and placed the concrete with buckets.

Rick Fox



8cubic yd. bucket on the
high line



RESEARCH TESTING FEATURES ABOUT SHASTA DAM

Shasta Dam has several research testing points, some visible, some hidden.

When Shasta was built, civil engineering was still learning about the characteristics of large concrete dams. The testing features were used to verify the math used in the design and to measure the dam's "health."

Let's start with the dam's "health." By health, we mean has anything changed after construction. Is the condition getting worse or staying the same? Due to construction techniques, all concrete dams have some leaks. Shasta has almost 17,000 blocks of concrete. Where these blocks meet, there is the possibility of a leak. Also, some water is forced

through the bedrock foundation due to pressure.

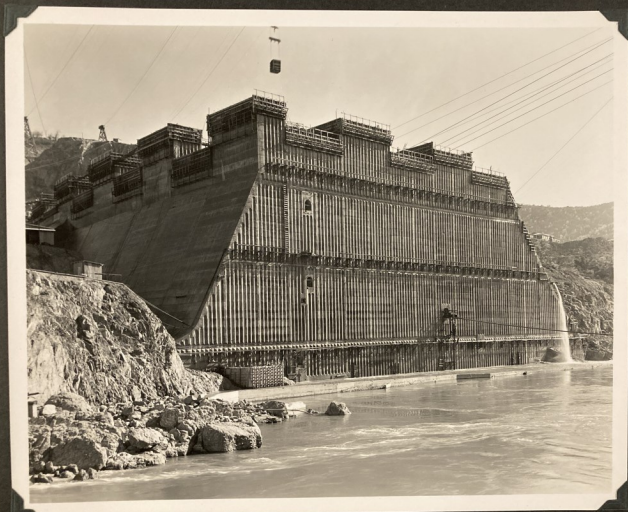
In the lowest inspection gallery (5.3 miles inside the dam), large bore holes extend over 100 feet into bedrock on the West side. I have heard these bore holes referred to as the "Moon Pools" and "Alligator Pools". They are 9 feet in diameter to allow a SCUBA diver to inspect the bedrock. Some water flows out of these bore holes. The flow of the water is measured, as well as the water's clarity (or turbidity) and temperature. The clarity is greenish, and the flow and temperature have all been constant since the dam was completed.

The "Moon Pools" are checked after any local earthquakes for any changes in the water. The visible feature is that if you look down at the spillway's base on the west side of the dam (by the passenger elevator tower), you can see water flowing out of outlet pipes. This water is from the "Moon Pools" and leaks in the inspection galleries.



A second visible feature is the spillway water velocity sensors. These sensors are brass plates set flush with the spillway's concrete. You can see these brass plates when the spillway is dry with no water flowing past the drum gates (you can see them if wet, it is just more difficult). The brass plates are about 10 inches by 10 inches, spaced about 2 feet apart and located in the first spillway section (3 sections total, 3 drum gates total or one drum gate per section).

To locate them, look about 10-15 feet to the left of the west side elevator (passenger) tower. You must look carefully as the plates have aged and are no longer bright & shiny. Once located, you can follow the sets of plates down from the spillway top to the river level below. The spacing down the spillway is approximately 25-30 feet (my guess). There are wires leading from these plates that are imbedded in the concrete and lead to a central point inside the dam. These contact plates are connected to meters, which can measure the water's conductivity. This conductivity measures the passage of electrical current through the water.



Shows placement of galleries - Jan. 1941

The engineers released saltwater above the sensor plates to measure the conductivity. The saltwater changed the conductivity of the water as it passed over the plates (saltwater is more conductive than fresh water). This conductivity change was timed as the water flowed down the spillway. The spacing of the plates down the spillway vs. the time it took equals the speed or velocity of the water. The engineers wanted to verify that the actual speed matched the calculated speed. As you can see, this was quite a complicated process. This was the technology available in the 1930s and 40s; with today's technology, you could use a Radar speed gun with instant results.

Shasta also has temperature sensors placed within the concrete. These sensors monitor the temperature of the concrete as it cures. Concrete curing is a chemical process that gives off heat, a process called "Hydration" and an "Exothermic Reaction." The temperature rise is about 30 degrees above the air temperature and causes the concrete to expand slightly. To control the expansion of the concrete, Shasta Dam was poured in "Blocks" that were 50 ft x 50 ft x 5 ft deep. Cooling pipes were installed in the blocks to remove the excess heat from the curing concrete.

The sensors measured the temperature change of the curing concrete. If the concrete had been poured as one giant block, the resulting crack would have amounted to about 6 ½ inches. Think of the joints between the blocks as expansion joints that you would find in concrete sidewalks or driveways. Once the blocks had cooled down, a special non-shrinking cement called "Grout" was mixed with water and pumped under high pressure to fill the small cracks between the blocks. Some leakage still occurs, such as water in the galleries, which is pumped out. The visible leakage appears as wet spots with plant growth on the dam's downstream face.

This last item may sound hard to believe, but it is true. Shasta has a "Plumb Line" fixed at the dam's base and stretches to the top. OK, so what? Well, the hard part to believe is due to the temperature change from winter to summer, Shasta Dam moves upstream about 1/8 of an inch, even with a full lake behind it. Remember, Shasta is a Gravity Arch type of dam, so the arch part expands with the summer heat (think of those 100-degree days). Even with over 6.2 million cubic yards of concrete in the dam, you would think there is no way it can move, yet due to thermal expansion, it does, and the plumb line proves it!

So, next time you go for a drive, cruise up to the magnificent Shasta Dam, and see if you can spot some of these features.

Rick Fox

DAM WORKER'S LINGO

"MUD" - CONCRETE, LAYING DOWN

"DOGGED OFF" - END OF SHIFT

"HIGHBALLED" - HURRIED

"MUCKING" - DIGGING FOR DYNAMITE BLASTS

ODDS 'n ENDS

The six years it took to build the dam required 19 MILLION man-hours. Miraculously, there were only 8 industrial deaths (total of 14 on the job), and 2 permanent disabilities.

COSTS: Reservoir: \$116 million; Power Plant: \$19.4 million and concrete structure: \$36 million

Sandy's Gift Shop NEWS



Easter books, Easter basket toys
NEW - Boomtown T-shirts, summer sweatshirts, tank tops
 and children's shirts! Our wonderful coffee mugs, jewelry,
 local honey and more. Come shop for **Easter** and
Mother's Day!



Do you have a favorite childhood food that brings back sweet memories?

For me, it's mom's famous Divinity Candy. This delightful candy comes with a few crucial guidelines: (1) never make it when it's raining (2) be careful not to whip it for too long (3) always remember to store it in a sealed container. Once it cools and is cut into pieces, it becomes the most amazing treat imaginable. Mom, Virginia (Bowers) Tavey, grew up in Central Valley. She met my dad, Dennis, and together they raised four daughters. She is a dedicated volunteer and cherishes her time at the Boomtown Museum on Wednesdays, and she is sharing her favorite recipe with you!

In a 2 qt. saucepan add 4 cups of sugar, 3/4 cup Karo syrup and 3/4 cup of water. Bring to a SUM OF COU boil until it reaches 255 degrees. In the meantime, beat 3 egg whites with a tsp. vanilla until firm peaks form. When mixture reaches 255, pour slowly over the egg whites and beat just until the gloss of the egg whites starts to leave. Do not overbeat! Drop by spoonfuls or pour into a 9x12 pam sprayed pan.



from Joan



SHOUT OUT - Thanks to **Don Mills** for fixing our video system in the museum and for editing our dvd's into movie clips!

Thanks to **Kathleen Barbour**, whose great-grandmother was Ethyl Green. Kathleen's family donated family and Shasta Dam photos, several are shown in this newspaper's articles.

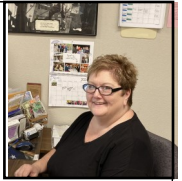
Thanks to **Cheryle Yednak and the Garden Project** for landscaping the area outside the Visitors center; to Linda Kank Beaver for the "rose her grandmother brought from Kennett" and Rick Fox for building a trellis.

Thanks to JoNeal Hansen for taking photos of our volunteers and posting them and articles on our FB page which we (and thanks to JoNeal) are doing our best to "clean up and update!"



President's Message
Joan Tavey Fackrell

2025 is the Year of Businesses. We are making a display of Then & Now. We have had so many businesses come and go over the years. Stop by our museum and see if you can remember where your favorite business was. Leave a note of your memory of these places.



This year's theme for the Damboree is "Roots of Our Community". We have taken their message to heart and hope to hear stories about your memories, see your photos and where your roots are now!

I want to thank all those who serve on our Board, our wonderful Docents, and our Volunteers. We appreciate those of you who give in membership and support. See us, enjoy "your" museum, and visit the excellent gift shop. Joan

THANK YOU FOR RENEWING MEMBERSHIPS *You are why we are!*
RENEWALS for 2025 SINCE LAST NEWSLETTER.



BENEFACTORS:

CHARLOTTE BAILEY-REDDING, WENDELL BAKER-GRAND TERRACE, JUDY BARBERA-LAKEHEAD, ALEX & KRISTA BARBOSA-MIDLAND, TX, MELODY & FLOYD CHRISTENSON-SHASTA LAKE, GALE CLARKE-REDDING, PATRICK COYLE-SANTA ROSA, PETE DROESCH-REDDING, JOHN DUCKETT-MIKE & JONNYFISH-REDDING, ERWIN "MAC" FORBES-SHASTA LAKE, MARY HALE-SHASTA LAKE, DWAIN HARTY-REDDING, RICK & KAREN FOX-SHASTA LAKE, MELISSA HLADEK-DUNSMUIR, ROY & CHERYL HULL-SHINGLETOWN, PEGGY & JOHN KENNEY-REDDING, BETTY LEAS-MT. SHASTA, CRAG & JESSACA LUGO-REDDING, WILLIAM "BILL" POLF-PITTSBORO, NC, AUDREY WYATT RILEY-GRAND TERRACE, DON SPURGEON-SHASTA LAKE, CAROL JO HALL TAYLOR-ROSEVILLE, TOM & SALLY TENNEY-SHASTA LAKE, CAROLA THOMPSON-SHASTA LAKE AND EARL & DEB WEST-GAFFNEY, SC.

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SPECIAL THANKS FOR EXTRA DONATIONS OVER \$1000 FROM: ALEX & KRISTA BARBOSA - MIDLAND, TX
FOR DONATIONS \$100 AND MORE: JOHN DUCKETT, MIKE & JONNY FISH, DWAIN HARTY AND WILLIAM "BILL" POLF
FOR DONATIONS \$10 AND MORE: VALERIE CANTWELL



WELCOME NEW MEMBERS!
BENEFACTOR: RICK SOMERS-REDDING
INDIVIDUALS: MARILYN ROUNTREE-REDDING, CHUCK SPAFFORD - REDDING AND ARLENE WOOD-REDDING.

Donna Adams brought in the "girls" from CVHS Classes of 1967-68. *Theresa Ninman; Linda Foster; Nadene Holladay & Mary Zambik* who became members, joining Pennie Goodwin and Melody Christenson.

Paul Jones from Redding stopped by to see our museum on his birthday. To help him celebrate, we gave him a gift membership!



Mike Lee Daniels 12/7/1946-1/21/2025

"Good Morning Sunshine" was a greeting you always heard from Mike with a big smile. He is truly missed by all of his family and friends. Mike graduated CVHS 1964 and married his high school sweetheart, Donna Flanery. Mike & Donna, opened the museum doors one day a week for many years. You would find Mike sitting at the computer scanning photos into our collection while Donna filed his work. On Saturdays, they would go "yard sale-ing" and over the years, brought treasures back to the museum. Mike was Vice President on our Board for many years and served as Vice President of Heritage Plaza Board of Directors, Redding..

We are very grateful to the Heritage Board of Directors for the significant donation in Mike's honor, and the generous donation from a business and family friend, Chic Miller, in memory of Mike.

Shasta Lake Heritage & Historical Society
P.O. Box 562 Shasta Lake, CA 96019
Visitors Center: *Boomtown Museum*
1525 Median St., Shasta Lake
530-275-3995
501c3 non-profit organization

IN MEMORIUM



*George Clarke 1927- 3/25/25 husband of Gale, SLHHS volunteer. George retired from the CA Highway Patrol after 25 years. Prior to the CHP, George served on Anderson , Corning and Red Bluff Police Dept.
Mike Daniels 12/7/1946 - 1/21/2025 (see pg. 7 inside)*

EVENTS TO REMEMBER

April 23 - Best Dam Car Show, Show & Shine & Poker Run in Margaret Polf Park 1-7pm sponsored by Shasta Lake Chamber of Commerce.

April 27th - Book presentation "Empowered Women of Shasta County" 2pm at the Shingletown Fire Hall.

May 3rd - 10am Community Clean Up Day

May 10th - 10am DAMBOREE PARADE AND BOOMTOWN FESTIVAL IN CLAIR ENGLE PARK and MOTHER'S DAY!

June 20th - 80th Celebration of the last bucket poured on Shasta Dam. (See inside for details).

and to put on your calendar now:

Friday October 3rd - SLHHS Annual Membership Dinner

Saturday November 8 - Veterans' Day Parade

Saturday November 15 - Community Holiday Bazaar

SUMMER NEWSLETTER: FAMILY STORIES - HAVE ANY TO SHARE? SEND US YOUR MEMORIES

Love history? Become a member.

Membership dues are renewable January of each year.

NAME _____

ADDRESS _____

PHONE _____

EMAIL _____

NEWSLETTER - ☐ email ☐ OR paper?

Please check the applicable boxes:

Individual \$10

☐

Family \$25

☐

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☐

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