



**April, 2015 Edition.** *Hotbox* is a monthly bulletin of The Railroad Museum at Ardenwood, designed to update members and the general public about **activities, work events, and volunteer opportunities** at the museum. Questions or comments can be directed to Bruce MacGregor, editor, at [bruce.macgregor@comcast.net](mailto:bruce.macgregor@comcast.net)

The Museum's mission is the preservation, restoration and interpretation of regional narrow gauge railroad history, including Carter Brothers, a pioneer railroad car builder of California. The Museum is operated by SPCRR, a non-profit, 501 (c)(3) corporation of the State of California. The Railroad Museum at Ardenwood is located at Ardenwood Historic Farm, in Fremont, California.

## General Manager's Report

The opening of the Park for the 2015 season is upon us, Thursday, April 2, is opening day and a lot of activities are going on. We still need help finding people to train for horse crew and to re-certify for locomotive crew. Stella is doing well around crowds of people but needs to practice pulling the train, and to do that, we need more than just Alex to make up a train crew. If any of you want to train on horse operation, please contact Alex or me and we will get you set up for some lessons.

This month we have work days on April 4, and April 25, Rail Adventure (Train rides) April 11, Tartan Day April 18, and Sheep Shearing Day April 26. These last three dates provide all-day train rides to the public, so we need all the help we can get! Please come out and volunteer!!! May is also a busy month. May 2, 9, 23, 30 are work days, May 16 is a Rail Adventure and May 25 (Memorial Day) is Free Day at the Park, so that means two days of all-day Train Rides. As you can see we need lots of help to cover all these days. **Please see page 10 for additional details.**

**Hope to we hear from you soon. To volunteer contact Barbara Culp, [general-manager@spcrr.org](mailto:general-manager@spcrr.org) or 510.785.1343; Alex Oberg [alex.oberg@gmail.com](mailto:alex.oberg@gmail.com) or 408.806.4851; John Stutz [president@spcrr.org](mailto:president@spcrr.org). Thanks in advance!!**

**Barbara Culp, General Manager**

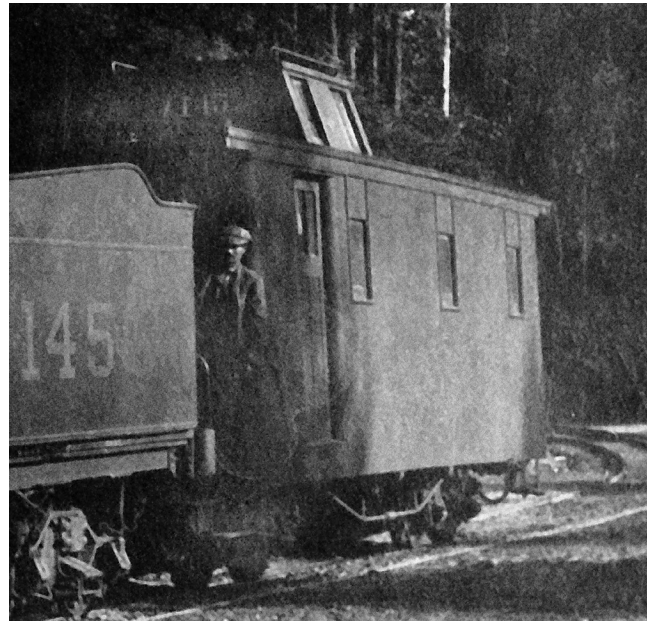
# The Art of Car Restoration- Hello 6101, goodbye 5591!

Kevin Bunker

The caboose we received from the California State Railroad Museum, under the guise of Northwestern Pacific Railroad No. 5591, has recently resumed its pre-1914 identity as Northwestern Pacific No. 6101. What the heck is going on?

Choosing a representative “interpretive” period for the restoration of any artifact, whether or not it has wheels, is seldom simple. An array of investigations should always be done first, and well-beforehand. In this case, only a small amount of attention had been given to this unique caboose due to the thought that we could just get it back into a safely serviceable state with not a great amount of physical work.

To be fair, the caboose looked pretty good as it was received from CSRM. The car’s earlier restorers, the Pacific Coast Chapter of the Railway & Locomotive Historical Society (R&LHS) had taken what was not much more than a tattered and deeply weathered car body, without a functional chassis let alone trucks, and turned it into a pleasing-looking representative of an “early 1920s” narrow gauge short line caboose. To be sure, their contract restorer – Bethlehem Shipyard near South San Francisco – copied some aspects of the features found on the remains and emulated other aspects as seen in a few circa 1920s and ‘30s black and white photographs.



ca 1908-1915, caboose 6101 at Monte Rio. *Northwestern Pacific Railroad Historical Society*

But the car in those images was already near the end of its life, and what they recreated, using inferior weldments and a lot of exterior plywood, was only fit for static display. Missing items included proper Kimball Car Works passenger trucks. New end platforms were affixed to the old frame by means of lag bolts. Had a locomotive or even a horse attempted to pull the caboose, the platforms would have quickly worked loose and fallen off since there were no integral draft timbers fitted with structural tie-rods! Still, our Curator, Randy Hees, got the end platforms properly integrated with the chassis and was preparing to get the Bethlehem-cobbled brake linkage to a functional state by making key modifications.

At this point questions were raised by members of the Board of Directors. If we were going this far, why not go even further? If we could halt the process long enough to actually study the caboose, using what little remained on its car body interior or lay hidden underneath the outer plywood walls, could we not gain an even more accurate representation of a California narrow gauge caboose?

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Bruce Sorrel removes bolts holding 6101's end ladder in place

After all, there weren't very many cabooses that followed the "classic" or familiar profile, with recognizable train-observation cupolas – at least not on the mere handful of California narrow gauge railways. And we had what is arguably the best example of such cars. What could it teach us? This is where we stopped to observe and listen to what "it had to say."

The processes of research toward a detailed or advanced restoration for a caboose or a coach are quite like the steps used for restoring a lowly flat car, but become far more complex, particularly if the car in question is unique or the sole surviving example. This caboose is both. Upon receiving a very crisp digital scan circa 1930 photograph, we learned one thing very quickly: this

caboose had four truss rod assemblies, not the two returned to the frame in the 1968 R&LHS restoration. Cross-checking the original needle-beams – "miraculously" intact after all these years – against that photograph proved that yes, there were inset pad locations for intermediate truss rods. These needed to be put back in place, which would definitely make a stronger frame, and certainly a more accurate one. But to do this meant falling back and not advancing the restoration effort until proper dimensional drawings and preparatory work could be done. Also, new or historic truss rod pads would have to be located either within our collection or sourced from a foundry. And finally, a set of wrought iron truss rods would have to be made and fitted.

Moving to the inside the car, we have little historical evidence to work with. The furnish-

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ings supplied during the R&LHS restoration were (to put it mildly) pure guesswork. With those furnishings stripped out to install proper tongue-and-groove flooring, we could take more time to look for clues of previous furnishings. Old placements of along-the-wall seatboxes are plainly visible in freshly unveiled walls, along with marks where the earlier cupola seat platforms and seatboxes had been located. Of particular note, some peculiar horizontal chafing marks were apparent on interior walls, located from roughly chest-to-eye level in the train crew section. Here the men typically sat or rested whether on or off duty.

What were these marks? All were old, erratically shaped and resembled (for lack of a better description) concave cigars. All are covered up with a lot of equally old paint. Days went by after we began studying the indentations. Then, while looking at some vintage Southern Pacific and Central Pacific caboose interior photographs made between the 1890s and 1920s, we saw drop-down wooden bunks. The forged strap-iron bunk hanger assemblies were mounted in places that seemingly corresponded with the marks inside our narrow gauge caboose!

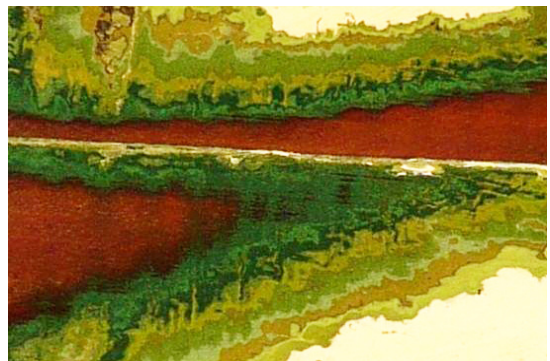
But why would a “crummy” like the 5591, working on a 60+ miles long short line, have bunks? Once again, this was another opportunity to stop and mull over possibilities. If the car was fitted with crew sleeping bunks, then it seems the railroad felt the need to house its trainmen overnight in the caboose at the far northern terminal, whether that was Duncans Mills or Cazadero. To adequately meet that need, there should have been three or four bunks, as in the standard gauge cabooses – several for the typical two or three rear-end brakemen and one for the conductor.

Pause, Reflect. Reconsider. This is the same

process that guides all aspects of a restoration. So too, we needed to study documentation (written, dimensioned drawings and photographic records) along with in-depth analysis of any extant historic paint.

So, after a lot of back-and-forth and lengthy discussions, we assembled a number of interested program “players”, and discussed the options already at hand. If we simply took the caboose back to a circa 1920s appearance, we would have a car much like the one we received, but in a better overall state. New tongue-and-groove siding could and should replace the inferior grooved plywood, but that would just be a start.

A hard-won \$10K grant from The Candlelighters in Fremont (secured just this past January) would buy us properly forged replica grab irons and end railings to replace the poorly done R&LHS versions. But – and this was a bone of contention for a few weeks – what if we went back further in time? We still don’t exactly know when this caboose was built. It seems to have begun life on the North Shore Railroad, that short-lived step child of the North Pacific Coast Railroad. But maybe it was a very late NPCRR Sausalito Shops-built car. Could we justifiably go that far back?



Historic paint layers, interior cupola area in caboose 6101. (Kevin Bunker)

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At this point, there seems to be nowhere near enough original exterior or interior material left to guide us to a pre-1907 appearance. The year 1907 marks the startup of the Northwestern Pacific Railroad, itself an amalgamation of “Redwood Empire” short lines that stretched from Humboldt to Richardson’s bays, Eureka to Sausalito, and elsewhere in the vicinity. The essential questions got asked at a very critical juncture, and several of the queries went to the good folks at the Northwestern Pacific Historical Society, currently headquartered in Petaluma. Member Mike Manson dug out two more very useful photos, although they were not dated. **See one example, top of Page 2.** In both images “our” caboose was shown coupled to a 3-foot gauge Brooks-built 4-6-0 already painted and lettered as “NWP 145.” Studying that engine’s details – it was still fitted with link and pin couplers and an acetylene gas headlight – gave us real clues that could be linked to the photos’ dates. On later dates, 145 received automatic knuckle couplers and train, or engine number “indicator” boxes, but these elements were not in the photos.

So we took the classic advice, “Stop. Look. Listen!” In looking at the two photos we saw a caboose with fewer ICC-mandated safety appliances, no roof-walks, and no extended hand returns atop the end ladders. What did it have for couplers? We couldn’t tell; it was shown coupled to the engine’s tender, and most of the end platforms and all draft gear elements were hidden. We turned to the wealth of Central and Southern Pacific drawings for wooden standard gauge cabooses dating from the 1890s, all part of the SP archival collections at the California State Railroad Museum.

These drawings bore a remarkably strong resemblance to our one-of-a-kind narrow gauge caboose, even though there was no direct SP corporate tie to the Northwestern Pacific – at least not in a legal sense – until the late 1920s. Yet our car has a cupola (albeit a R&LHS copy) that is almost exactly like the CP and SP versions, only smaller. Their cabooses had drop-down bunks. Ours had them, and of the same type, for the holes do align with a version of CP-SP practice. It’s hard to say why these parallels exist, but they plainly do.

One more historic image had to be considered. Many years ago, the NWPRRHS ran a pictorial calendar in the 1980s using select old photographs, supposedly taken from its nascent archives or the personal collections of its membership. One month’s panel showed a scene taken at Duncan’s Mills. The image was taken either on the afternoon of April 18th 1906 or the day after. North Shore Railroad 2-6-0 No. 13 is seen helping to right one or more box cars that had been suddenly derailed around 5:13 AM on the 18th, moments after the devastating earthquake hit San Francisco and the surrounding coastal regions and caused far greater damages. In the background of the same scene is an overturned car, one with a side door, passenger-type trucks and at least one end platform. Less than a third of that toppled car is visible.

“Stop. Look. Listen!” The more we studied that poor quality digital image – the original photograph has yet to be turned up by NWPRRHS – we still saw what seems to be “our” caboose. The side door is in the right place, the platform hoods or “overhangs” are on a level plane, and do not resemble the dipped “bullnose” clerestory hoods or even the duckbill hoods of passenger cars on the NPC and NS. The only side window visible is in the proper spot relative to the side door, and the number of structural sills aligns with the caboose we have. And a link-and-pin coupler is visible! But the cupola – if it was then present – is invisible since the car is on its side. Now what!? More dialog, more listening, more study.

In meeting and weighing just this much information, all laboriously dug out and examined inside a 6-week period, gave us just enough information to ask the key questions one more time. What would be the best possible and most useful historically interpretive period this caboose could give us and our museum visitors/train riders?

Charting all the knowns and unknowns got us to the here-and-now. In weighing the range of possibilities, we found – rather easily – that a res-

toration keyed to the circa 1910 -1913 period would grant us a very useful car, one that looks similar to the one we got from CSRM, but with less “iron.” In the two photos taken with locomotive No. 145, the caboose would have been Northwestern Pacific No. 6101, no question. (It was renumbered as 5591 in December 1914.)

Since it then lacked Interstate Commerce Commission-mandated roof-walks, wrap-around safety grabs on the cupola roof, and return grab irons between the tops of the end ladders and car roof, we could more easily backdate the car. Having the gold mine of CP-SP 1890s caboose drawings will hugely aid our efforts to recreate the best-guess interpretation of a wholly vanished original interior. Such features often lasted intact or with some modifications for 30 or more years. Furthermore, returning the car to one equipped with link and pin couplings gets us a caboose that fits our railroad’s overall interpretive operational period.

Restoring the car to a circa 1925-1929 state? While quite possible, such a choice would portray a railroad and caboose “at death’s door,” for the former North Pacific Coast-North Shore-NWP abandoned its narrow gauge train operations 85 years ago, in March 1930. This happened just as the Great Depression and automobiles and trucks killed what precious little freight and passenger business the line still had. That could be an instructive period, but was it best for us? Making the opposite choice solved much and gains us even more.

We are now re-engineering the caboose restoration effort to accommodate the necessary new forgings, truss rods and older-style couplers. Forgings will be crafted this year by a contract blacksmith in Oregon.

The existing budget will be made even more detailed, and a program time line for the work to be accomplished must immediately be fleshed-out. We will definitely have to seek more funds from a variety of sources. Although new tongue-and-groove solid lumber siding

boards are on order, the car body framing will need some repairs, particularly in replacing the “midships” nailing girths that are over 100 years old and too pocked with ancient nail holes and some rot. Oh, and did we say that body framing is redwood rather than the typical Douglas fir? Well, redwood it is, a previously unknown and very local redwood country approach to car building practices. This is one more revelation gained by stripping away the plywood siding and slowly studying the structure.

“Stay tuned.” The discoveries continue. There is more to come as this fascinating restoration effort unfolds and advances.



Jack Burgess begins to remove a ladder from the body of caboose 6101. Select pieces of car hardware will be either modified or completely rebuilt to conform to new target restoration dates, ca 1910-1913.

# President's Box

Here are the hot issues for April.

**- Park opening:** We are actually in good shape for opening, so far as the physical plant goes. Our critical shortage is volunteers who can come out and help with operations, particularly on week-days. We need conductors to present our story, answer questions, and keep an eye on the schools kids. We absolutely need brakemen, who are essential for horse operations, to stop the car if the horse stops abruptly for some reason.

For the first time in several years we will need to do some early weed cutting along the track, due to delays in the permitting process to allow us to spray. The weeds are not yet up to historic heights, and will not yet interfere with operation, but we will need to take them down as soon as they are dead. The grass & etc. west of the car barn is already over 2 feet high, and Andy has mowed access paths to the tie piles, but we will soon lose sight of a couple rail piles. So we are eagerly awaiting the goat's arrival, which may be a few weeks yet.

**-Operations:** We will again be doing a Rail Adventure Day one Saturday (mid-month) from April to July. This is a special all-volunteer operation, using an engine-hauled train, with passengers riding on an all day ticket. So if you would like to get a chance at operating your railroad without having to worry about the horse, give these days a try.

Also note the several major park events (see page 10) where we will usually be operating three car loco-drawn trains on a quick turnaround schedule. We will need to have certified staff on each car, again to present our story, answer questions and keep an eye on the public. And it is a good idea to have someone at any station that has a long line, to jolly the riders as they wait. No experience is needed for either position, so give it a thought. Part day volunteers are very welcome, and give full day volunteers a chance to take a break.

**-Car restoration:** We are contracting to have professional quality drawings made of the NWP caboose framing and details, and this will require a temporary slowdown of caboose restoration until we can analyze the results and lay out a plan for full restoration. Purchase of iron work is going ahead under the supervision of Randy Hees and personal care of Bruce MacGregor.

It is suggested that we turn our immediate restoration efforts to sprucing up some of the more public cars. We have volunteers interested in painting boxcar 472. Boxcar 10 is in dire need of a paint job, even though it was noted that the contrast between 10 and a repainted 472 would advertise what we do. Flat 1725 needs a repaint and 222 has never been lettered. What these and similar projects require is that someone take responsibility to work with Randy and ensure that the needed supplies and materials are on hand, and that the project be advertised well in advance. I would really like to see some of these, or similar ideas, go forward to completion this summer. But we are currently very short of project managers to take the time to ensure that we are able to do the scheduled work.

John Stutz, President



# A Message from The Mercantile

The Rail Fair Mercantile will be open for business during Rail Fair this year. Look for us under the white pop-up tent across from the Museum Car. This year we will be selling our usual top sellers for kids plus a Brio style SPCRR souvenir engine.

The donated railroadiana items that we carried in the store last year generated a lot of interest as well as sales. Two dog spikes from the C&C (one left to sell), several lanterns, some WP dishes (one left to sell), railroad books and photos were among the railroadiana items sold.

While you are doing your Spring cleaning this year, please consider putting some railroadiana items aside to donate to the store. **Alice and Kathy will be at the Car Barn on June 20 from 10-1 to collect donations.** There are donation forms attached to this e-mail for your convenience. Photos and paper items can be mailed to SPCRR P.O. Box 783, Newark, CA 95460. Look for additional information in future editions of Hotbox.

Since The Mercantile is only open three days a year, we're looking for railroadiana items in the \$5-\$100 range that we can sell quickly. Items we're looking for include:

- Railroad hardware (lanterns, etc.)
- Scale model railroad kits, parts and rolling stock
- Railroad Books
- Children's Railroad Items (toys, books, etc)
- Photos (copies of historic rail photos-Pacific Coast Narrow Gauge)
- Historic Railroad Paper Items (original way bills, receipts, etc.)
- Tools (vintage or antique)
- Odds and Ends (railroad pins, plaques, signs, etc.)

Looking forward to seeing you and your railroadiana at the Car Barn on Saturday, June 20th. Alice is bringing the bagels and coffee. Please contact her ([afevarts @comcast.net](mailto:afevarts@comcast.net)) with any questions about this event.





# Museum Goals for 2015

## **Operations -**

- \*Return of horse-pulled trains. Increase the number of volunteer crew members available for operations.
- \*Return one Sorensen flatcar to operation (evaluation of car's condition still required)

## **Restoration -**

- \*Continue to restore caboose 6101 (previously 5591).
- \*Begin initial planning for restoration of combine 1010.
- \*Complete painting and details of box car 472.
- \*Launch "study phase" for at least one car (pre-restoration study and research).

## **Car Barn -**

- \* Completion of outdoor storage tracks 4 and 5.
- \* Construct corp yard fence.

## **Collections**

- \* Create shelving and other storage to hold patterns and historic parts currently stored outside of the Eastern Terminal complex.

## **Contract with EBRPD**

- \*Negotiate and renew contract with District to reflect realistic operating costs and constraints.

# Calendar focus on April, May, June

**Editor's Note:** This month we're trying a new approach to work day announcements. We're recognizing that almost every Saturday, a work activity is going on, so we want to provide a three month look-ahead in a single location. Most work events are based either at the front depot area or the Car Barn area at the eastern end of the park. For further information, please contact: John Stutz (track, and fixed plant maintenance), [John.C.Stutz@nasa.gov](mailto:John.C.Stutz@nasa.gov) ; Randy Hees (car restoration), [randyhees@gmail.com](mailto:randyhees@gmail.com); Ken Underhill (car barn organization and upkeep), [kcunderhill@yahoo.com](mailto:kcunderhill@yahoo.com) . For operations, contact Alex Oberg or Barbara Culp, [general-manager@spcrr.org](mailto:general-manager@spcrr.org)

**Thur. 4/02** - Operations begin

**Sat, 4/04** - New gates under construction for horse barn area

**Sat. 4/11** - Rail Adventure Operations - train crew needed for April 11 and 12 for the Santa Clara Depot open house.

**Sat. 4/18** - Tartan Day - heavy operations - extra volunteers needed for West Side Reunion

**Thur. 4/23** - Rail Car Operators visit - Car Barn Docents needed - this event is being hosted by John ErdKamp for national speeder group

**Sat. 4/25** - Car Restoration or Track construction

**Sun. 4/26** - Sheep Shearing - heavy operations- extra volunteers needed

**Sat. 5/02** - Track construction or work on horse area

**Sat. 5/09** - Car Restoration

**Sat. 5/16** - Rail Adventure Operations - docents needed for train crew and Car Barn for May 13-17 NMRA Convention.

**Sat. 5/23** - Track construction

**Mon. 5/25** - Park Open House (free day)  
- heavy operations - extra volunteers needed

**Sat. 5/30** - Car Restoration

**Sat. 6/06** - Track construction

**Sat. 6/13** - Car Restoration