Nevada County Narrow Gauge Railroad
by Tom Towner (layout photos Howard McKinney)

(Tom Towner graciously volunteered to share his historic photos of the Nevada County Narrow Gauge Railroad when one of the previously announced presenters was unable to make the April 9th clinic meeting. Tom shared 150 photos and topped off the presentation with a tour of his previous layout that had to be dismantled due to a move. I appreciate Tom continuing to share with Short Line readers. ~ Ed.)

I have been a model railroader since I bought my first Varney Dockside in 1948. I have had layouts small and large, but never really the layout I wanted to spend the rest of my life building and detailing. I finally did spend five fun filled years building that dream layout. This is the story of building my version of the Nevada County Narrow Gauge Rail Road (NCNG).

Shortly after retiring, I decided it was time to design and build my On3 dream layout. The first thing that stood in the way was the lack of a suitable room for the layout. After much head scratching, I decided to add a new room over the garage and kitchen. The room size was 18 feet by 22 feet.

Follow this link for the expanded digital color issue of the Short Line: http://www.pcrnmra.org/sierra/index.html
The X2011 NMRA National Convention is over. There were about 2,000 people registered this year. This is good compared to 2 years ago there was only about 1,000. This show was well run and promoted.

The National Train Show had an attendance of about 20,000 people. This again was up from last year. It was well promoted. I saw several electronic billboards and ads for it.

I am late getting this report out. I have been very busy with something happening everyday in the month of July. I was also sick for 2 weeks starting about the time the convention started. I am feeling better now.

Our next Division Meet will be August 13. We are going to ride the Virginia and Truckee Railroad. This is the longer train ride that is 1 1/2 hours each way. The steam train leaves Carson City at 10AM and returns about 4PM (get there by 9:45). We are trying to arrange a shop tour when the train gets to Virginia City. There should be time to see the shops and still eat lunch. The ticket costs are $48 for adults, $42 for seniors and $28 for children. There is a $2 service fee. You can buy tickets at http://vttrain.activitytickets.com/type/train

Please send me an e-mail and tell me if you are going.

We tried to have a picnic at Grass Valley where we could see the model railroad at the fairgrounds and the museum in Nevada City. The County Fair got in our way. We are trying to do this in October.

At the October Meeting we will have nominations for the position of Sierra Division Director to the PCR BofD. If you are interested in helping with this job, please contact me. We will be looking for nominations for Superintendent, Chief Clerk and Paymaster in a little over a year. We also need some to help coordinate the Sierra Division’s role at the International Railfair in November.

Jim Long
The “Want Ad” is a strong plea for readers to originate or share other modeling tips that were gained from workshops or the internet. I would really like to have a few “HOW TO” articles in each edition. If the source is from a website, send along the link and I will contact the owner seeking permission. The previous issue on weathering was a sample of the what I would like to see more of in the Short Line.

When I started putting together this issue, we were going to have our next meet in Grass Valley, so I tried to gather some information on the Nevada County Narrow Gauge Railroad. The meet there has since been postponed (see From the Superintendent). This issue should give you an idea of what to look forward to. I appreciate the willingness of Nevada County Narrow Gauge Historical Model Railroad members and the Nevada County Narrow Gauge Railroad Museum curator going out of their way to share their wonderful exhibits. If any readers would like to write about other nearby museums, please send text, photos, and other details to the editor. People like Tom Towner who shared his previous layout and John J. O‘dell sharing about NCNGRR history make the editor’s job much easier and the content interesting for the rest of us.

Please contribute if you can.

Remember to check out the color Digital Short Line that has additional content. If you don’t have a computer or slow dial-up, perhaps you could view the additional content at a friend’s house, public library or at a Wi-Fi hot spot. http://www.pcrnmra.org/sierra/index.html

The OPSIG provided an opportunity to operate of many layouts during the convention. I had the opportunity to operate on the Sacramento Model Railroad Historical Society layout. It uses Digitrax and a CTC signaling system and car cards.

Later in the week I traveled with some new friends to Twain Harte and had two operating sessions with each one lasting over six hours. First up was Steve Hayes’ 1970 era Western Pacific layout. It uses homemade infrared throttles along with Bruce Chubb’s cab control and is fully signaled. There is a dispatcher’s office with a CTC machine. A computer generated waybill system along with heavy mainline traffic over the large 30 foot by 60 foot layout kept everyone on their toes (and led to a few errors by yours truly). The second stop was at John Zach’s 1955 Sierra Railroad with it’s ten plus scale miles of track. It also used the same computer generated waybill system that was used at Hayes’, but also included a modified switch list that told only the number of setouts and pickups at each location. I haven’t operated on many layouts with waybills, so this along with a more relaxed operations allowed me to operate without errors. It also used EasyDCC (which I have) and John acted as dispatcher as he wandered around the four-level maze.

Operation sessions such as these help in deciding what you want on your own railroad if you are just planning or may change some of your operational plans if you already have a layout. I find them very helpful (and sometimes a little stressful learning a new layout) and always a lot of fun. Over the years I have picked up many ideas for my currently under construction layout—such as mid-train helpers with a 2nd engineer from Jim Providenza, switch lists and hand signals from the late Dallas Gilbertson, and this time more ideas about how freight will be forwarded from branch lines as I operated on John Zach’s layout. Many thanks to all those who opened up their layouts for operations and gave others a chance to operate. If you are not yet a member of the Operations Special Interest Group that sponsors these activities, you can join at: http://www.opsig.org The annual S.F. Bay Area PCR/LDSIG/OPSIG Meet is in January with lots of opportunities to operate.
Who knew that remodeling the kitchen was part of the fun of model railroading, but that was a small price to pay to make my wife happier. It took longer to get the permits than it did to build the room.

I am a little bit of a renegade when it comes to choosing a prototype to model. Some years before this project, I had decided that I did not want to model the usual (D&RGW). I had built scenes and later modules using NCNG for inspiration. I wanted to create as real an interpretation of the NCNG as would be practical. How does one put 26 miles of railroad in that small a space and still maintain a 39 inch minimum mainline radius? After much discussion with fellow modelers, I had that AH-HA moment that made the On3 layout possible. It was to make the Town Talk tunnel scale out much longer than the prototype. This also gave me the ability to have a Sunday Morning Track for continuous running. This proved very useful when sharing the layout on tours.

The bench work followed normal practices. I cut a full sheet of plywood into three inch by eight foot strips and used it to make two sixteen foot long “L” girders and for stringers to support the road bed. I also made ½ inch plywood gussets to cantilever from the walls. On top of this grid work, I used ½ inch plywood and “Celotex” insulation board for road bed.

I chose to hand lay all the track and build the switches in place. I like to use code 100 rail just for the physical properties involved with the material. The time spent was therapy for me. Also, it is much less expensive to build your own. The switches were operated by Tortoise machines. The toggles for the turnouts were located in recesses near the machines. There were no ground throws. I did this so as to keep errant hands out of the scenery.

I opted to do 99% of the construction myself, as I had built other layouts with the help of fellow modelers. While it was fun building these previous layouts, the theme got away from my original concept with each layout, and there were hurt feelings among my helpers when I removed the sections that did not fit my concept. I did not want that to happen on this layout, so this layout was done solo.

The scenery base was made from blue and/or pink foam. It is light and strong. It takes plaster and plaster cloth well. I enjoyed working with this material. Using foam instead of screen wire or a card board net exchanged one form of mess for another. The foam was easier to clean up after. Another of the advantages of using foam is that trees and other scenery material can easily be inserted.

The control system was with NCE DCC, both radio and hard wired. The layout was set up in two power districts, so that a short circuit in one district did not affect the other.

The time period for the layout was 1936, plus or minus. I already had the three steam locomotives that were operating at that time, and was able to acquire more rolling stock to make up a respectable stable for the model NCNG. Many of the structures were personally scratch built. I had a great time building and sharing the NCNG, but situations change and it is now but a fond memory.
The need for rail service in the semi-mountainous and wooded area of Grass Valley and Nevada City was precipitated by mining operations subsequent to the California Gold Rush. In addition, timber operators wanted to make their land accessible to the Southern Pacific Company in Colfax. On March 20, 1874, the California legislature and Governor Newton Booth approved the right to build and operate a narrow gauge railroad from Colfax, through Grass Valley, to Nevada City. On June 20, an Act of Congress granted the railroad right of way through public lands.

J. H. Bates estimated that construction and equipment would total $411,132. Only one bid came in and it was for $500,000, signed by M. F. Beatty; he received a lump sum of $500,000. Construction began January 1875. Knox were subcontracted for earthwork. John Flint Kidder was the chief engineer. Within two months, 600 men were employed in the railroad’s construction.

Construction included two bridges, two tunnels, and five trestles. After leaving the Colfax depot, the road headed north, parallel with the Central Pacific Railroad, then crossed Bear River, and into Nevada County. One of the first stations was at the town of You Bet which serviced the Goodwin Drift Gravel Mine. The road proceeded into Chicago Park, a fruit and grape growers colony, and then continued into Grass Valley. All cars and locomotives had Westinghouse railway brakes, and cars used for passenger service had Miller Platform couplers. As the first contractor, Beatty, was unable to complete the project, a second, J. K. Bynre, was brought in; construction was completed in the spring of 1876. The inaugural train, from Colfax to Grass Valley, ran on April 11 and by May 20, the first train reached Nevada City.

The company’s first President was John C. Coleman, president of the North Star Mine. Kidder, the builder, decided to settle down in Grass Valley, becoming the General Superintendent, and in 1884, became the second president. Upon his death in 1901, Kidder’s widow, Sarah, took over, becoming the first female railroad president in the world.

In September 1907, a 3.56 mi (5.73 km) “cut-off”, at a cost of $132,285 was built, bettering the grade. The following year, construction was completed on the Bear River Bridge. By 1912, the NCNGRR was running three mixed trains daily, each way, between Nevada City and Colfax, while a fourth mixed train ran daily, each way, between Grass Valley and Colfax. Sarah Kidder sold her interests in 1913 and retired to San Francisco.

In 1926, Earl Taylor and his associates purchased the railroad for $1. With the outbreak of World War II, they sold it in 1942 for $251,000 to Dulian Steel Products Company and the last train to run over the line was on May 29.

Each combination coach had a small iron safe in the baggage compartment. Though $200,000,000 in gold was hauled out of Nevada County by the NCNGRR during its operation, there was never an attempted robbery.

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**Great Web Sites**

A great place to find out more about the Nevada County Narrow Gauge Railroad is: [http://www.nevadacountynarrowgauge.com/archive.html](http://www.nevadacountynarrowgauge.com/archive.html) which is the [Online Archive of the Nevada County Narrow Gauge Railroad](http://www.nevadacountynarrowgauge.com/archive.html). This particular page has many photos of the NCNG. Also on the site are all kinds of interesting facts about the railroad.

**Foothill Model Works** has a very complete list on publications, drawings and videos about the NCNG that have appeared over the years. [http://www.foothillmodelworks.com/NCNGRef.html](http://www.foothillmodelworks.com/NCNGRef.html)

**X2011WEST** is not over yet. There is a web site with 26 of the clinics and handouts. [http://www.x2011west.org/handouts.html](http://www.x2011west.org/handouts.html)

**Model Railroad Hobbyist magazine** has video interviews at the [X2011WEST National Train Show](http://www.x2011west.org/handouts.html) with Walthers, BLMA, ExactRail, and Scenic Express with more to come. [http://model-railroad-hobbyist.com/MRHT_2011_NTS](http://model-railroad-hobbyist.com/MRHT_2011_NTS)

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**History of the NCNGRR by John J. O’Dell**

The need for rail service in the semi-mountainous and wooded area of Grass Valley and Nevada City was precipitated by mining operations subsequent to the California Gold Rush. In addition, timber operators wanted to make their land accessible to the Southern Pacific Company in Colfax. On March 20, 1874, the California legislature and Governor Newton Booth approved the right to build and operate a narrow gauge railroad from Colfax, through Grass Valley, to Nevada City. On June 20, an Act of Congress granted the railroad right of way through public lands.

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Each combination coach had a small iron safe in the baggage compartment. Though $200,000,000 in gold was hauled out of Nevada County by the NCNGRR during its operation, there was never an attempted robbery.
I had the opportunity to visit the Nevada County Narrow Gauge Historical Model Railroad. Three gracious hosts, Ed Homer, Phil Lawrence, and Doug Doane greeted me—complete with flags flying and hung bunting.

The NCNGHMRR is located on the Nevada County Fair Grounds. The On3 layout was started 25 years ago in a 1000 square foot Quonset hut and has five scale miles of track including scenes of Colfax, Nevada City, and Grass Valley in the 1930’s.

They advertise that they are “NOT A CLUB”, but an educational organization. There is lots to do and they are always looking for new members. There are many detailed structures on the layout but some stand-in buildings need replacing and new equipment would be welcome due to their running trains for hours at a time during fair activities. They have some very impressive, old growth Douglas fir trees but could always use more. For history buffs, they are an education museum offering tours to school groups and fair visitors. The club would like to start a program which would allow young engineers to run trains.

Currently the club has fifteen members (both male and female) that make up this very friendly public service oriented group. They seek to expand. If you are interested in building, painting, modeling, being a docent or meeting gracious people, give them a call at (530) 451-6264.

Upcoming Open House events are:

- “Never Come, Never Go” Sept. 10—11
- “Iron Horse Roundup” Sept 23—25
- “Ghost Train LTD” Oct. 29
- “Polar Express” Nov. 25—27

There is free admission to all Open Houses, however concurrent fairground events may require additional admission and parking charges. Check the club’s web site for more information:

www.NCNGMODELRAILROAD.org

(more in the Digital Short Line)
A trip to the Nevada County Narrow Gauge Railroad Museum is something the whole family can enjoy. The museum not only houses railroad artifacts, locos and cars, but a variety of transportation exhibits. There is an steam car that visitors can see the engine work with compressed air, an adult Soap Box Derby car that placed third among 42 entries, a model and video about an aircraft that may have predated the Wright Brothers, and many other transportation items. All visitors are offered a tour by a docent which includes the shop. My family had the pleasure by being escorted around by the curator, Brian Blair. I observed other visitors having tours and found the docents especially kid friendly.

The museum sits on 2 acres of land at 5 Kidder Court, Nevada City, CA. It built at this location nine years ago and is funded through donations and operated by the Nevada County Historical Society. The museum also received a grant from the National Railroad Historical Society to restore Flatcar #255. A trip through the shops is a must. The volunteers (25 regular and 25 that come in whenever their special skills are needed) who have put in over 100,000 hours in nine years and continue to put in 1000 hours each year. I visited on a weekday and there were half a dozen people working in the shop. Each car that is rebuilt is done to exacting standards. Lumber is of the same type used in the original car and is custom milled to whatever shape is needed. When there are not enough original parts, new ones are cast to match the original. I’ve visited many railroad museums across the U.S., and feel the restoration work being done here top notch.

There are only three surviving NCNGRR pieces of equipment: Engine #5 that had been bought by Universal Studios just prior to WWII, and the tanks from two of the fifteen tank cars. The museum has one of the tanks and has rebuilding the car (the other tank is in private ownership). All other NCNGRR rolling stock was either sent to Pearl Harbor or scrapped for the war effort. However, there is a lot of narrow gauge rolling stock to see from other railroads including equipment that is identical to that of the NCNGRR. There were at least 8 restored cars and others awaiting restoration, in addition to two Plymouth switchers, a rail bus and a shop built 0-4-0.

Summertime Hours (May 1– Oct. 31) 
Friday—Tuesday, 10 AM—4 PM

Winter Hours (Nov. 1—April 30) 
Saturday & Sunday, 10 AM—4 PM

For more information including a complete history of NCNGRR locomotives, go to the museum web site: www.NCNGRRMuseum.org

There are several other museums to visit while in Nevada City including Firehouse #1, Searls Historical Library, and the North Star Mining Museum.
**SIERRA DIVISION**

Next Meeting: Saturday, August 13  
Place: V&T Railroad  
    Carson City Eastgate Depot  
    Carson City, NV  
Time: 9:45 AM to 4:00 PM

**Timetable**

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<tr>
<td>August 13</td>
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<td>October 8</td>
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**Short Line Deadlines**

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<td>July 9</td>
<td>for the August issue</td>
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<tr>
<td>Sept. 10</td>
<td>for the Oct. issue</td>
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<td>Jan. 7</td>
<td>for the Feb. issue</td>
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**Sierra Division Area**

**Hobby Shows & Rail-fanning Events**

For more events or info, go to [www.pcrnmra.org/pcr/calendar/mastercalendar.htm](http://www.pcrnmra.org/pcr/calendar/mastercalendar.htm)

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<td>August 11—21</td>
<td>Eel River Valley Model Railroaders Open House, Hindley Hall at Humboldt County Fairgrounds, Ferndale, CA. Fair admission required.</td>
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<tr>
<td>August 17—21</td>
<td>Ringling Brothers &amp; Barnum &amp; Bailey Circus Red Train, San Jose, CA</td>
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<td>August 20</td>
<td>Daylight Division Meet, 9:30 am to 5:00 pm. Fig Garden Library Meeting Room, 3071 West Bullard Ave, Fresno, CA</td>
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<td>July 1-3</td>
<td>17th Annual Garden Layout Tour &amp; Food Drive, 9:00 am to 4:00 pm, get guide book for 10 layouts at Garden Accents, 11155 Lena Avenue, Gilroy, CA or BookSmart, 80 East 2nd St, Morgan Hill, CA. Call Dale at (408) 848–1440 for more info or email at <a href="mailto:dalemccannally@verizon.net">dalemccannally@verizon.net</a></td>
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<tr>
<td>August 26</td>
<td>Walnut Creek Model Railroad Society Model Train Show, 8:00 am to 10:00 pm, Larkey Park, 2751 Buena vista Ave, Walnut Creek, CA</td>
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<td>Sept. 8—11</td>
<td>Ringling Brothers &amp; Barnum &amp; Bailey Circus Red Train, Oakland, CA</td>
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65 members have signed up for the Digital Short Line saving $265!  
Email Jim Long if you want to switch: jimclong@sbcglobal.net

Dozens of photos from NMRA Contest Room are in Digital Short Line.  Above is Bob Wirthlin’s tribute to his father.

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Above is Bob Wirthlin’s tribute to his father.
Oilville, looking down from the highway bridge. This is where the Nevada County transferred oil from the SP, and where locos could take on oil for the return trip to Grass Valley and Nevada City. NG car is a Foothill kit, other is an Intermountain kit. (photographer unknown)

(All B&W photos are from the Tom Towner collection unless noted otherwise)

Bear River Bridge, built 1906. Mine is made from atlas HO deck girders, Atlas HO bridge trusses, and Central Valley lattice beams. (Photographer unknown—Doug MacLeod Collection)

Locos on the dead line at Grass Valley, in front of the machine shop. (Louis Stein Photo) The cars are on the same track in my version. The station is kit bashed from a Lionel Rico Station, the cars are by San Juan, Foothill, Bachman, and scratch built. The machine shop and blacksmith shop are scratch built.

(more in the Digital Short Line—pg. 10)
There were wonderful people on the layout tours and also manufacturers that were not NMRA members. If you know someone, give them this coupon for a 6 month membership including **NMRA Magazine**.

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**Tom Towner’s NCNGRR** FROM PAGE 9

The turntable in Grass Valley. Model built from a Valley Car Works kit. The tank car is a converted Bachman.
Tom used Sanborn Fire Insurance Maps in researching town sites. For California, microfiche copies are available at the University of California, Berkeley. Many library systems subscribe to the digital version. Do an internet search with the geographic area that you are interested in. Sometimes in your search you will find limited time access to all U.S. maps. Ask your local library or nearby college library how you can access them. (printed with permission—Environmental Data Resources)
The end of NCNGRR cars. Cars were burned to get metal for the war effort. A few were transferred to Pearl Harbor. Two original tanks still exist—one in private hands and the other on a new frame at the NCNGRR Museum in Grass Valley. - Editor (photos—Towner collection)
Many thanks to my historical tour hosts. (left to right: Ed Homer, Doug Doane, and Phil Lawrence)
An October 8th picnic is tentatively scheduled for the Grass Valley Fairgrounds where the Nevada County Narrow Gauge Historical Model Railroad is located. Mark your calendars!
Engine #5 is a cosmetically restored 1895 Baldwin from the NCNGRR. Boxcar 142 is identical to 11 cars on the railroad. Tank car 187 was purchased by NCNG in 1934—original tank on rebuilt flat. Flat 255 is rebuilt 1917 SP flatcar converted to gondola in 1920. Museum has other transportation exhibits including this adult soapbox derby car that placed third in recent competition.
More NCNGRR history can be found at the museum web site: [http://www.ncngrrmuseum.org/](http://www.ncngrrmuseum.org/)
I’ve included some of the excellent models seen in the contest room at the convention. Names of those who entered were not available at the time I took the pictures because the models were not yet judged. I had hoped to get a list after judging, but was elsewhere that day. Pictures are unedited as a time-saving factor. Enjoy.

I did identify one model (wrongly) on page 9 of the printed version of *Short Line*. The model of the Southern Cooperage Company belongs to an excellent modeling friend: **Bob Wirthlin**. Bob made the model as a tribute to his father who worked there. In my editing error, I gave Paul Volker, a fellow editor from Atlanta, GA, credit. Editors make errors too—hopefully not too often. Below is Bob’s model.
As I looked thru the contest entries, I decided to mainly choose photos that showed weathering and scenic details that might help with modeling. I also included some that were just great models.
Yes, it’s prototypical!