The Trainmaster

February 2013

The Official Publication of the
Pacific Northwest Chapter
National Railway Historical Society
Portland, Oregon

A Real PNW Heavy Weight

On August 9, 2012 Victor Peters posted on Trainorders.com some pictures of a lead lined locomotive located in southeastern Idaho that prompted an investigation and this article.

Part of the extensive Idaho National Laboratory includes the Experimental Breeder Reactor No. 1 (EBR-1) Atomic Museum. This facility is located on U.S. Highway 20/26 between Idaho Falls and Arco. The facility, a National Historic Landmark where usable electricity was first generated from nuclear energy in 1951, is open to the public from Memorial Day weekend through Labor Day weekend – seven days a week – from 9 a.m. to 5 p.m.; admission is free. It's the only place in America you can see four nuclear reactors – including two aircraft nuclear propulsion prototypes, a reactor control room, remote handling devices for radioactive materials, radiation detection equipment and much more.

A&M. Shielded locomotive (TAN-607), March 2004; used with permission from INL; photo from Library of Congress HAER ID 33-E-76; INEEL negative no. HD-39-10-3

As part of the 1950s Aircraft Nuclear Propulsion Project to develop a nuclear powered bomber, a lead lined railroad locomotive was built to move the bomber in and out of its hanger. Outside the EBR-1 is this preserved locomotive and the two General Electric nuclear propulsion prototype motors. The locomotive ran on standard rails but the dolly for moving the test nuclear engines ran on four rails. The nuclear powered bomber project could not overcome the weight required to shield the crew from the radiation and was canceled by President John F. Kennedy on March 28, 1961.

INFORMATION RE:

ANP Project – 215 Ton General Electric Diesel Electric Locomotive, Class A1A-A1A-255/430-4GE733

SOURCE:

Electro-Mechanical Engineering Services Department, General Electric Laboratory, Instructions GEI-44853, ANP Project, Remote Handling Equipment: Shielded Locomotive. Vol. X Schenectady, New York: General Electric Company, c. 1954.

"The Shielded Locomotive was designed and fabricated for the ANP [Aircraft Nuclear Propulsion] Project to transport men and material into and out of a radiation zone.

The locomotive is capable of carrying 12 men plus the operator inside its shielded compartment. With only this load, it is capable of speeds up to 10 mph. The locomotive is also capable of moving a loaded dolly with a

total weight of about 320 tons. This load can be moved by the locomotive at speeds up to about 5 mph.

The locomotive is provided with a "reversible blade" type snow plow to aid in clearing the trackage of snow for winter operation. This snow plow is easily installed or removed as the need arises." (Electro-Mechanical Engineering Services Department, General Electric Laboratory c.1954,1)

"In order to facilitate a locomotive type vehicle quickly and easily, it was necessary to utilize as many components of standard locomotive design as possible. Consequently, the Shielded Locomotive is designed around the standard GE 44 ton locomotive. Many of the components, such as the diesel engine, traction motor, generator and auxiliaries are the same as those used on the standard locomotive. The physical arrangement and control for these components have been altered to meet specific needs.

The total weight of the Shielded Locomotive is about two hundred fifteen tons. Since it was necessary to keep the weight to a minimum, the locomotive is carried on 6 highly loaded axles instead of 8 as would normally be used for the equivalent weight. The speed requirements for this locomotive are low and this factor favored many alterations in design over standard locomotives.

As prime mover, the Shielded Locomotive will be capable of pulling or pushing the loaded power plant dolly at a speed of up to 5 miles per hour on a 1% grade. Without the power plant dolly, the locomotive will be capable of a speed of about 10 miles per hour.

The power for the locomotive will be supplied by two 200 HP, 8-cylinder V-type Caterpillar diesels, type D17000. These diesels will supply power to 2 DC generators. The 2 DC generators drive 4 traction motors mounted 2 on the front truck and 2 on the rear truck. Auxiliary power will be furnished by 2 auxiliary generators mounted one on each main generator. Air will be supplied by two air compressors mounted in conjunction with the two main generators.

The trucks which will carry the locomotive are 3 axle trucks. Each truck will have two motored axles and one idle axle. The wheels on all axles are 33" in diameter. The front truck will carry approximately 29 tons on each motored axle and 57 tons on the idle axle. The rear truck will carry approximately 27.8 tons on each motored axle and 45 tons on the idle axle. The front truck has a type E coupler mounted directly, while the rear coupler will be mounted on the frame of the chassis. Each truck is equipped with electro-pneumatic air brakes.

The main frame consists of two 36" CB sections beams braced with 16" CB section beams. For the most part the frame is a welded fabrication.

The personnel compartment of the locomotive is capable of seating twelve people in addition to the locomotive operator. It is constructed is such a manner as to protect these people from radiation... In order to provide adequate shielding for the personnel against radiation, the compartment is lined with lead and surrounded by a jacket of water. This water must be provided with an anti-freeze for cold weather operation. The lead lining on the locomotive is a homogeneous mass of lead bonded to steel plates. The water jacket completely surrounds the lead and steel liner. The outer shell of the water jacket is a 1/4" steel plate welded and braced with 2" and 3" steel angles in order to support the weight and forces of inertia involved in movement. The angle braces from the inner lining to the outer shell are offset in order to eliminate any straight through paths for radiation to follow. The water jacket is supplied with expansion tanks of such capacity as to accommodate thermal expansion through a range of temperatures of about 50 degrees Fahrenheit. The main expansion tank is provided with a sight glass to enable an observer to determine if water is to be added or drained off. Each separate water compartment has an expansion tank, a fill cap, and a drain plug.

The personnel passage-way, which is the normal means of entering and leaving the locomotive, is in the bottom of the compartment. This device has the same general construction as the personnel compartment. This device is essentially a shielded tube which protects personnel while passing from the locomotive into a tunnel located between the center pair of rails and designed to fit this shielded tube.

In order for the locomotive operator to view the trackage, turntable, and power plant dolly, a window is provided in both front and rear ends of the compartment. These windows are of the liquid filled, leaded glass type construction. The front window allows the operator to view the front coupler directly and also the top of

the dolly when coupled to the locomotive. The windows are designed with a stepped construction to eliminate any straight through paths for radiation. The windows contain enough high density leaded glass to be the equivalent of the thickness of lead on both the front and rear of the compartment. A clear non-freezing fluid should be used in the compartments of the windows. Since the leaded glass is soluble in water, some other fluid must be used. The fluid compartments of the windows are made up of layers of non-browning cerium glass. Expansion tanks are provided for the fluid compartments of both windows. Window wipers are provided for reach window for inclement weather.

A system consisting of a fan, ducting, filters, and electric strip heaters are provided to filter and warm the air for the interior of the compartment, the fan is capable of completely changing the air in the compartment once every 97 seconds. The filters in the system will remove all particles of 1 micron in diameter and 99 percent of particles 3/10 micron in diameter. Air will be exhausted through part of the same tube that carries the control wiring in to the compartment. Twin seal beam lights are provided on the outside of the locomotive to aid in viewing forward and aft during darkness. Two horns are mounted on top of the compartment. These horns sound forward and to the rear simultaneously.

For winter operation, a snow plow can be installed on the locomotive to aid in removing snow from the trackage. The snow plow is a one-way, reversible-blade type which mounts in the front of the locomotive. It is capable of clearing a 9' path with each pass.

Snaptran-2 experiment mounted on dolly being hauled by shielded locomotive from IET towards A&M turntable. Note leads from experiment gathered at coupling bar in lower right of view. August 25, 1965, INEEL Negative no. 65-4503; used with permission from INL; photo from Library of Congress HAER ID 33-E-49

All locomotive controls and instruments are located either at the forward or rear operation stations or at both. Controls are of the remote type; either electrical, hydraulic, pneumatic, mechanical or combinations of these. There are indicating lights to show operating limitations or control positions of most components. Dial type instruments are provided for some components.

The forward-reverse control is a standard locomotive component for controlling the direction of travel.

The speed control is a standard locomotive component with a modification for remote control engine shut down. This control is normally operated with the left hand, but on the Shielded Locomotive, it will be operated with the right hand.

Air brakes are a standard locomotive component modified for special service. Normally, the air brakes on both trucks operate from one reservoir. This had been modified so that each truck will operate its brakes from a separate reservoir and air compressor. This method provides braking for the locomotive if one of the air systems should fail. The brake controls are connected in parallel to both control stations so that by manipulating the control handle at either station, the brakes will be applied to both trucks simultaneously. The brake control is of the SB9-switch type with four positions: Release, service application, full service application, and emergency application. The three brake applications regulate the amount of air pressure applied to the brake shoes. These pressures can be shop adjusted to accommodate any operating conditions. The solenoid valves and brakes are arranged to allow movement of the locomotive in the event of an electrical power or air failure.

Since the locomotive is designed to operate normally with both diesels running simultaneously, a selector switch is provided in order to operate on one diesel in the event the other fails. The engine starting switch is located in the forward operating station only. The three positions of this switch are marked No. 1 engine,

both, and No. 2 engine.

The engine staring [starting?] buttons are located on the forward station only.

The diesel engines are provided with the following instruments.

1. Water temperature at the forward station only with indicating lights.
2. Lube oil pressure at the forward station only with indicating lights.
3. Speedometer, both stations, Dial type, calibrated 0-20 miles per hour.

One traction motor on each truck is provided with a load indicator which is essentially an ammeter. These two load indicators are located on the forward station only.

Each auxiliary generator has its own load ammeter. These two ammeters are located on the forward control station only.

The brakes have indicating lights to indicate if the reservoir pressure is adequate and also, a light which tells the operator each of the four positions of the brake control handle.

The personnel passage-way is lowered over the tunnel entrance and raised again by means of a hydraulic pump-jack system. The pumps and jacks are located outside of the compartments, but the control switched for raising and lowering are at the forward operation station.

The two way radio is installed for communication between the locomotive and the other areas of the test site. The radio chassis, controls, and speaker are located inside the compartment at the forward operating control station. The antenna for the radio is mounted on the top of the main expansion tank.

The twin sealed beam lights are controlled from the forward operating station only.

Each coupler is remotely controlled from its respective operating station. The couplers are air operated through solenoid valves. They are designed to stay closed in the event of air or electrical failure…

The horns are operated by a button located at each control station.

The windows wipers are air operated and control the solenoid valves. These controls are operated from both stations. Each wiper will operate individually from a switch on the respective control station.

The interior lights for the compartment are controlled from both operating stations.

The snow plow is actuated by air cylinders and controlled by solenoid valves. The controls for the snow plow are at the forward operation station." (Electro-Mechanical Engineering Services Department, General Electric Laboratory c.1954,2-9)

For further information about this interesting project and insights into an interesting period in our history, go to www.inl.gov/publications and open the link: Proving the Principle. Chapter 13 in this rather large document is titled *The Triumph of Political Gravity Over Nuclear Flight* and provides an extensive history of the project from inception to cancellation. The chapter leads off with this quote: "If everything had worked out perfectly, it still would have been a bum airplane", Charles Wilson, Secretary of Defense.

Recent Photo by Victor Peters

This information extracted August 12, 2012 from the Idaho National Laboratory web site: www.inl.gov/ebr and from Christina Olson, Archivist/Historian, Idaho National Laboratory Archives and Special Collections. The photo graciously supplied by Victor Peters; article developed by Arlen Sheldrake

PNW SHORT LINES

by Arlen L. Sheldrake

On December 19th the U.S. Department of Transportation signed an agreement that will provide $1.55 billion to the city and county of Honolulu to build Hawaii's first-ever-transit-rail system. The agreement commits federals to the 20-mile, 21-station rail line that will travel through West Oahu, Pearl City, Aloha Stadium, Pearl Harbor Naval Base, Honolulu International Airport, downtown Honolulu and AlaMoana Center. The Federal Transit Administration will provide just under $1.8 billion in funds for the $5.1 billion project including a $1.55 billion through the New Starts program, $209.9 million in federal formula funds and $4 million in stimulus dollars. **Progressive Railroading December 20, 2012.**

The Wallowa Union Railroad Authority on December 18th terminated the contract with Court Hammond's Sierra Nevada and Pacific Company. Items cited for contract termination included owing money to WURR and other vendors, failure to pay for insurance and failure to provide promised equipment. A meeting in late January with the Friends of the Joseph Branch, the volunteer group that helps run WURA's excursions will begin the process of figuring out what to do about 2013 operations. As part of the December 18th meeting, the WURA's board toured the new multi-modal transit hub recently built in Elgin, Oregon to serve as headquarters for WURA and as a waypoint for the bus service. A $1 million *Connect* Oregon III grant paid for the construction of the 2,400-square foot building, a parking lot, a railroad siding and a bus garage. The building features a lobby, offices, a conference room, a ticket office, a space for a gift shop and a kitchen. The hub will open after WURA has a new operations plan. **La Grande Observer, December 21, 2012.**

Interurban train service between Seattle and Tacoma ended on December 30, 1928. Interurban service between the two cities began in 1902, following Puget Sound Traction, Light & Power Company's acquisition of an incomplete railway launched by Henry Bucey in 1901. PSTL&P completed the line, which it called the Puget Sound Electric Railway, and inaugurated service on September 25, 1902. **History Link File #2671,** http://www.historylink.org**.**

The Surface Transportation Board on December 20th announced it approved the acquisition of Rail America Inc. by Genesee & Wyoming Inc (GWI). The decision is effective December 28thand GWI took control of the company on that date. In the PNW this includes:

Cascade and Columbia River (CSCD) interchanges with BNSF in Wenatchee, WA and runs north to Oroville. This line was originally built in 1914 by the Great Northern Railroad to the main line in Wenatchee to the Washington & Great Northern/Vancouver, Victoria & Eastern line at Oroville. The CSCD operates 148 miles of track and moves over 5,200 cars per year.

Puget Sound and Pacific Railroad (PSAP) moves more than 30,000 carloads over 108 miles of track in Northwest Washington. Interchanges with UP at Blakeslee Junction and BNSF at Centralia, PSAP serves the Port of Grays Harbor.

Central Oregon and Pacific Railroad (CORP) operates between Northern California and Eugene, Oregon with a total of 389 miles of mainline. Traffic on CORP is approximately 17,000 cars. Interchanges: Union Pacific at Black Butte, California and Springfield Junction, Oregon; Yreka Western at Montague, California; White City Terminal Railroad at White City, Oregon.

Genesee & Wyoming already owns Portland & Western and Willamette & Pacific railroads that operate in the Willamette Valley and Northwest Oregon**. Progress Railroading December 21st** and http://www.railamerica.com**.**

The Inland Empire Railway Historical Society, a NRHS chapter located in central Washington, has launched an aggressive plan to build in phases their Inland Northwest Rail Museum in Reardan, Washington. Phase 1 is estimated to cost $2.7 million and fund raising has begun. More information: www.inlandnwrailmuseum.com. **Sidetrack volume 17, Third & Fourth quarters 2012 newsletter.**

The White City Terminal Union Railway, a formerly nationally unknown speck on Warren Buffett's Berkshire Hathaway balance sheet is now the prize possession of Scott B. DeVries of Superior, Wisconsin, an engineer for Canadian National's Wisconsin Central subsidiary. DeVries formed RVTR Rail Holdings to make the purchase and plans to move to the Rogue Valley in the spring. The WCTU has been renamed the Rogue Valley Terminal Railroad. In addition to the 14 miles of track, it includes two locomotives. **The Mail Tribune December 21, 2012 & Railway Age January 16, 2013**. (Hopefully this bodes well for the Southern Oregon Chapter who stores some equipment on this railroad.)

A new rail company, Western Washington Railroad (WWR), has taken over operations on 7.6 miles of track leased from Tacoma Rail between Chehalis and Centralia. WWR was founded earlier in 2012 by Van Altvorst in partnership with Paul Didelius. Van Altvorst also manages the City of Prineville Railway, and previously was part of the marketing team at the Portland & Western Railroad. Didelius is also the principal of Frontier Rail, a transload and rail switching firm, and also operates the Lake County Railroad in Southern Oregon, and the White Swan branch in Washington. **Trains News Wire December 19,2012.**

The first train over the Great Northern Railway's newly competed transcontinental tracks arrived in Seattle on January 7, 1893. **HistoryLink.org**, The Free Online Encylopedia of Washington State History.

A late December mailing from the Northwest Railway Museum in Snoqualmie indicated that restoration of the chapel car 5 Messenger of Peace is nearing completion with the lowering of the car onto its new trucks. Interior work is progressing rapidly with the sanctuary substantially completed with all the ceiling, panels and moldings now repaired and reinstalled. Work has now shifted to the parsonage where a replacement wall is being constructed to again enclose the kitchen and restroom. Another $30,000 is needed to fully fund the $360,000 project. More information: www.trainmuseum.org.

The log reloading yard operated by Teevin Bros. in Crabtree, Oregon does not meet county code and the Linn County Planning Director has issued a cease and desist order. The 2.42-acre site is zoned limited industrial and had been a lumber mill in the 1930s and '40s. The Planning Director determined the reload facility is a heavy industrial use and is not allowed on the property and that Teevin Bros. is not a rail carrier and is not shielded by federal pre-emption. The reload is served by the Albany and Eastern Railroad and transports logs to Rainier, Oregon for export via interchange with Portland & Western Railroad in Albany. The ruling may be appealed to the Linn County Board of Commissioners. **Albany Democrat-Herald, December 26, 2012.**

The Sound Transit Board December 20th approved a $1.1 billion 2013 budget that moves light rail expansions forward while positioning the regional transit system to carry more that 28 million riders. Major light rail capital and planning investments in 2013 include: $166 million to continue construction of the extension from downtown Seattle to the University of Washington**;** $83.8 million for the Northgate Link Extension design and construction**;** $91.9 for East Link final design; $72 million for design-build work to extend light rail from Sea-Tac Airport to South 200th Street**;** $8.1 million for ongoing environmental review and public involvement to identify a route southward from South 200th Street to Highline, Kent/Des Moines and Federal Way; $10.4 million for ongoing environmental review and public involvement to identify a route for the Lynwood Link Extension from Northgate to Lynwood; $55 million to fund the City of Seattle's ongoing construction of the First Hill Streetcar connector linking that community with Seattle's Capitol Hill to International District/Chinatown Station. **Sound Transit December 20, 2012 press release.**

Sharon Wood-Wortman*, aka The Bridge Lady*, asked if there was a name for the railroad bridge near Lake Oswego. So off the question went to historian Bob Melbo who provided the following response: "I'm not aware that the railroad bridge between Lake Oswego and Milwaukie ever received a specific name, unlike the Steel Bridge. The Oswego-Milwaukie bridge is older, built in 1910 by the Beaverton & Willsburg Railroad, which was incorporated in 1906 to build 10.35 miles of railroad in two separate sections. One segment was the Beaverton to Cook alignment and the other was the segment between Oswego (Wilsonia) to Willsburg Jct. that included the Willamette River bridge. From the start B&W was owned by Southern Pacific and it was merged into SP on June 30, 1916. It's interesting to note that one segment of the bridge (the river crossing is comprised of several different types of bridge structures) dates back to 1900 and came to be part of the Willamette River structure second-hand. This is the single 50-foot long deck plate girder portion of the bridge on the west side of the river that was installed second-hand in 1931. It originally was fabricated askew (at an angle) over Hollister Avenue in Santa Barbara. For whatever reason the Hollister Avenue bridge was replaced and the displaced structure was modified for reuse in Oregon. The two main through-truss pin-connected spans are each 297 feet, 9 inches in length and they were fabricated in 1910 specifically for the use we see today. Their height is 80 feet above mean river level. There is also a 60-foot timber pile driven trestle on the west approach between the deck plate girder segment and the earthen-fill roadbed. On the east side of the river the curved approach timber trestle is 668 feet in length and is 70 feet high at its highest point. Union Pacific owns the line and it has been leased to Portland & Western Railroad since August of 1995."

BNSF Railway has launched a project to convert maps of 32,000 miles of track and railroad's land possessions into a geographic information system. Bartlett & West has been contracted to do the job and has hired 100 temporary workers and is working two shifts to complete the project over the next year. After the maps are created, the work will shift to interpreting all of the contracts, deeds and other documents related to land owned by BNSF, about 300,000 documents. **The Topeka Capital Journal January 3, 2013.** Bartlett & West is headquartered in Topeka, Kansas.

In my opinion, Alexander B. Craghead, writer, photographer, watercolorist, and self-described "*transportation geek*" from Portland, Ore. is hitting home runs with his Departures commentaries in the monthly Railfan & Railroad magazine. He nailed me with his December "WARNING: Railroad Books are Addictive" commentary; however, he could have added DVDs.

In November 2012 the Chelatchie Prairie Railroad completed the purchase of Crossett Western #10, a 1929 built Alco 2-8-2T. The #10 is expected to be operating in 2013 out of Yacolt, Washington. More information: www.bycx.com.

The very last logger in the country to use disconnect log trucks was the Georgia Pacific Toledo, Oregon operations that were purchased in 1951 from the C.D. Johnson Lumber Company. On December 31, 1959 George Pacific 2-6-2T #9 pulled her train of disconnects for the last time back from the long dump to the shops at Siletz. **Trainorders.com posting January 6, 2013 by Martin E. Hansen.**

The Seattle Department of Transportation on December 21st reopened the Airport Way South Viaduct in north Georgetown after a year long closure and $34 million rehabilitation. Spanning the Argo Railroad Yard, the viaduct was built in 1928 to separate Airport Way South and the Union Pacific, Northern Pacific and Seattle-to-Tacoma Interurban railroad tracks. Crews still have to install a 10-foot-tall railroad fence on the west side of the south approach to discourage the throwing of debris on the tracks. (So get your photos soon!) **Seattle Daily Journal of Commerce January 2, 2013.**

One item in the American Taxpayer Relief Act signed into law on January 3rd was Section 306 that extended for one year a $165 million tax credit to America's shortline railroad companies. To qualify as a shortline or Class III, the railroad must earn less than $34.7 million annually. The Railway Tie Association estimates the tax credit will pay for the installation of between 500,000 and 1,500,000 rail ties. **Missoula News January7, 2013.**

Burlington Northern Santa Fe spokesman Gus Melonas says tracks between Seattle and Everett have been shut down for passenger trains 95 percent of the time since Thanksgiving. He says there have been 75 slides in that period**. The Associated Press January 9, 2013.**

The city of Lake Oswego has agreed to lease two working replicas [built by Gomaco in 1991] of Portland's old Council Crest streetcars from Vintage Trolley Inc. to run along the Willamette River shoreline between Lake Oswego and just south of the Sellwood Bridge. The Sellwood Bridge replacement project blocks operation of the streetcar further north to the South Waterfront area. The historical right of way is owned by a government consortium to preserve the route for possible mass-transit use. The members of the consortium are: cities of Lake Oswego and Portland, Metro, Clackamas County, TriMet and the Oregon Department of Transportation who purchased the line in the 1980s. Members pay dues to cover maintenance and operations. The Oregon Electric Railway Historical Society, operators of the Willamette Shore Trolley, plan to begin operations this spring [May 25-27]. The Sellwood Bridge replacement project includes upgrading part of the rail line near the bridge, replacing ties, stabilizing the slope and improving drainage. The lease for the two trolleys takes effect in February and lasts through January 31, 2018; they will be housed in the Lake Oswego trolley barn in the Foothills area**. Portland Tribune January 10, 2013.** More information: www.oerhs.org.

TriMet will be operating vintage trolleys on selected Sundays in 2013 between Union Station and Portland State University. The Sundays are: May 26, July 7, September 1, and December 1, 8, & 22. (This abbreviated schedule should easily be handled by the remaining two vintage trolleys.)

Members of the Oregon Electric Railway Historical Society and the public can enjoy some very interesting history in the quarterly OERHS newsletter *The Transfer*. Current and past issues are available: www.oerhs.org/transfer. The Fall 2012 issue includes part three of a series on the Oregon Electric Railway by Roy Bonn.

The Astoria Railroad Preservation Association continues to work on restoring the former Santa Maria #21 built by Baldwin in 1925. About six members meet every Saturday to work on the restoration and hope to have it operational in 12 months if additional help can be obtained. Restoration began in 1990. **The Daily Astorian January 14, 2013**.

The Oregon Rail Heritage Center

OPR 5100 Oregon Pacific Railroad Loaned for display by Dick Samuels

Photo by Trent Stetz

GE 70 tonner diesel electric locomotive was built in 1949 and served on the Weyerhaeuser Mohawk Division (Springfield Oregon area) until 1986. It was purchased by Dick Samuels, owner of the Oregon Pacific Railroad, in 1989. It is currently not operational but is nearly so and is retained for display purposes. The 5100 was painted in Southern Pacific colors in 2001 by OPR for the Southern Pacific Historical Society convention that was held in the Portland area that year.

The GE 70 tonner is a 4 axle switch engine that was built by General Electric from January 1946 to approximately 1958. Approximately 238 locomotives were built. Horse power varied, but was generally around 600 h.p. They weighed approximately 139,000 lbs. Fuel capacity was about 500 gallons. This engine survived the scrappers as Weyerhaeuser needed a relatively light engine with light axle loads to operate over a weak bridge on the Southern Pacific/Weyerhaeuser owned Mohawk Division. SP sold several of its 70 tonner units to Weyerhaeuser in the early 1960s and Weyerhaeuser continued to operate GE 70 tonners on this line for several decades. This locomotive remained in SP service until 1977, when it was finally transferred to Weyerhaeuser.

This information extracted from Brian McCamish's www.oregonpacificrr.com web site December 2012. The locomotive is expected to begin its display run on the future turntable lead December 14, 2012 and remain on display until late Spring 2013; appreciation to Dick Samuels for his continued support and the loan. The Oregon Pacific Railroad is owned by Dick Samuels and is a short line with two branches: 1) East Portland to Milwaukie serving a frozen food warehouse, 2) Molalla Branch, Canby to Molalla serving multiple customers. Article provided by Arlen Sheldrake.

50 Years ago in the *Trainmaster*....

NEW MEMBERS in February 1963:

We are most happy to welcome the following new members:
Edward M. Berntsen, Marsh F. Beall, Dwight M. Smith, Jeff Richardson,
John M. Holst, Harold L. Throckmorton, Charles F. West
Associate Member – Ronald E. Lutz,

MEMBERSHIP MEETING PROGRAM - Friday - February 15th

Urban Trains, a Kalmbach Publishing video showing the history of urban train beginning with horse drawn cars in the very early 1800s and continues with electric and other propulsion systems. The video shows the development of the New York Subway System, BART, and developments in many other cities, some of which are similar to that which happened in the Portland area.

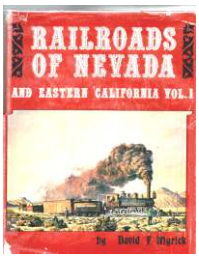
In the Library and Archives...

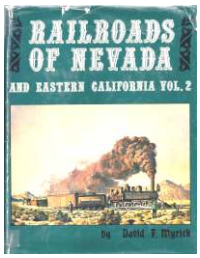
by Dave Willworth

Nevada Railroads

One section of the PNWC Library is dedicated to Nevada railroads. At first Nevada was only a place to pass through on the way to California and the Pacific Coast. Later, in 1849 it was the California gold fields that were sought. Then in 1859 the gold seekers flowed back into Nevada to the fortunes of the Comstock Lode and many other mining discoveries. Throughout this time proposals for railroads were initiated to gain better access to California and later to transport ore in Nevada. Many routes were envisioned and in 1862 with the signing of the Pacific Railroad Act the building of the transcontinental railroad was underway through Nevada.

Tying into this railroad mainline were many short lines bringing out ore from the mines and supplying the mines with needed freight, timber and workers. They also hauled timber and freight for expansion of the areas.
With these books, research can be done on the Virginia & Truckee (V&T) #11 "Reno" after which the Zoo Railway's Steam Locomotive *Oregon* is patterned.





Railroads of Nevada and Eastern California Vol. 1 & 2 by David F. Myrick (1962 & 1963) These two comprehensive books give detailed descriptions of the many rail lines that were built to transport the riches in the Northern part (Vol. 1) and the Southern part (Vol. 2) of Nevada and eastern California. Included are many photos, maps, rail yard diagrams, rosters, facts and figures. The building of the transcontinental railroad by the Central Pacific through Nevada's high mountains and deserts is covered. There is good detail of the principal mines, mills, and their production with photos showing operations of the short lines.

Pacific Northwest Chapter Lending Library

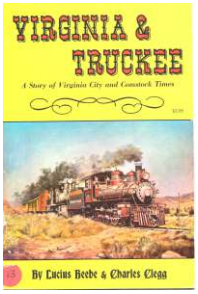
OPEN Mondays in February

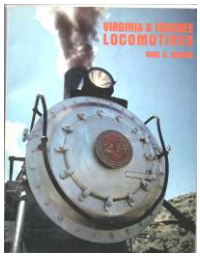
Open February 16th (Saturday) 1pm to 4pm
and open every Monday 10 am to Noon

The Library is normally open the Saturday following the membership meeting.
The Library is located at:
Union Station Annex, 503 NW Irving, Portland
(The Annex is the brick building just south of Union Station.)

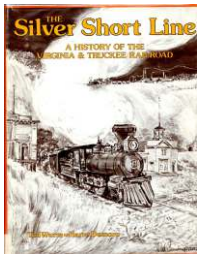
library@pnwc-nrhs.org 503-226-NRHS

Virginia & Truckee by Lucius Beebe and Charles Clegg (4th printing 1949, 5th 1980) **(A Story of Virginia City and Comstock Times)** The V&T RR is probably the most famous short line railroad and one of the riches measured in terms of return upon its investment. The railroad happened to be completed just before the great Bonanza of the Comstock Lode was born and this was the mining area it served. ***Virginia & Truckee*** is a small, condensed book that describes how the V&T was a very successful railroad operation. There are many pictures to go along with the reading. The PNWC Library has both the hard copy and a copy of the softback in a later printing.





Virginia & Truckee Locomotives by Karl R. Koenig (1980)
This wonderful book starts out with a chapter on the history of the V&T and then there is a separate page for each of the 32 locomotives that were on the railroad's roster. There are photographs, specifications and a life story for each locomotive except one.



The Silver Short Line by Ted Wurm and Harre W. Demoro (1983)
(*A History of the Virginia & Truckee Railroad*)
The ***Silver Short Line*** is a highly illustrated book that chronicles the history of the Virginia & Truckee Railroad from its conception through the later rail excursions in the 1950's. Much of the equipment on the V&T has been used in films and an Appendix lists equipment and names the movies/commercials they stared in.

January Membership Meeting Minutes

Pacific Northwest Chapter - National Railway Historical Society

Held on January 18, 2013

The meeting was called to order by President Keith Fleschner at 7:35pm. There were no guests to be recognized so we moved on to the December minutes. Arlen Sheldrake made a motion to approve the minutes and Leonard Morgan seconded. The membership voted to approve the minutes.

George Hickok gave the monthly treasurers report that all the accounts balance. He also reported that the Steel Bridge book is selling and we are getting close to the breakeven point. He then reported that the poster project is into the second poster and the production is well under budget. The second poster should be done soon. Tammy Auburg voted to approve the report and Doug Auburg seconded. The membership voted to accept the report.

President Fleschner reminded everyone that it is time to get the 2013 dues paid.

Also a reminder that the SP&S swap meet in January 19th at the Airport Holiday Inn from 10am till 3pm.

Christopher Bowers reported that over half of the Trainmaster issues are on-line, 1955 – 1986 and 2007 – 2012. By going to members only site you can see the new issues in full color.

Keith Fleschner thanked Al Baker for his time as Director-At-Large and appreciated his willingness to continue as finding the monthly programs. Ken Vannice is the new Director-At-Large.

Dave Willworth announced that he has set up the library display tonight relating to the program topic of the zoo railroad. He reminded everyone that the library is open January 19th, 12Noon to 4pm and will be open Mondays from 10am to 12Noon.

Arlen Sheldrake announced that Tri-Met is installing a heavy/light rail diamond near the ORHC Enginehouse. It is the only one in use in the Pacific Northwest.

Al Baker announced that the program tonight is presented by Jeff Honeyman on the Zoo Railroad and the changes happening. He said next month will be the first of a three month ongoing program on interurban railroads.

Jean Hickok said she is working on finalizing the design on the new chapter vest and when it is done she will announce the price for those wishing to purchase one.

Trent Stetz announced that the Oregon Historical Society has some of our equipment on display for the current railroad theme display.

The meeting was adjourned at 8:07pm at which time everyone enjoyed snack time provide this month by Jean Hickok.

Jeff Honeyman then gave a very interesting and informative presentation of what is planned for the rerouting of the Zoo Railroad over the next year because of the expansion of the elephant yard and other changes in the landscape.

Respectfully submitted by Jim Hokinson, Secretary.

Photos by Jim Hokinson

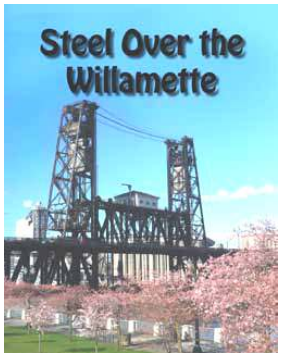
ALL ABOARD: RAILROADING AND PORTLAND'S BLACK COMMUNITY

When: January 15 to April 21, 2013
Where: Oregon Historical Society Museum in Portland

The REA Baggage wagon with its Chapter Archive pictures and trunk, previously on display at Portland Union Station, is a centerpiece to the exhibit. Another Chapter Archive item, a sign from the *Portland Rose,* is also on display.

Photos by Trent Stetz

Available Now



Celebrating the 100th anniversary of this world unique bridge, this 60-page book tells the story of Portland's Steel Bridge in text, with dozens of historic and current photos. Available for just $14.99 plus $5.00 shipping or pick up your copy at a membership meeting and save $5!

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Portland OR 97209-3794

Questions: steelbridge@pnwc-nrhs.org

Bill of Lading

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Secretary	Jim Hokinson	503.635.4826
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Ron McCoy	2012-2014	503.310.4811
Christopher Bowers	2012-2014	503.577.0063
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The Trainmaster is the official newsletter of the Pacific Northwest Chapter of the National Railway Historical Society. It is published monthly for the benefit of its members. Articles which appear in *The Trainmaster* does not express the official position of the organization on any subject unless specifically noted as such. Material from *The Trainmaster* may be reprinted in other publications provided credit is given as to the source, except in cases where the article originated in a third party publication and special permission was given to *The Trainmaster* to print the article here. Please address contributions and correspondence to:

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PACIFIC NORTHWEST CHAPTER TIMETABLE No· 607

Board of Director's Meetings: February 7, Thursday, 9320 SW Barbur Blvd, Suite 200, 7:30pm
March 7, Thursday, 9320 SW Barbur Blvd, Suite 200, 7:30pm

(Open to all Members. Note address for Board meetings; follow instructions posted on the door for entry.)

Membership Meetings: St. Mark's Lutheran Church, 5415 SE Powell Blvd. 7:30 pm (Guests Most Welcome!)

Forward program ideas to Al Baker, 503.645.9079 or albaker33@comcast.net

February 15: *Urban Trains*, a Kalmbach Publishing video showing the history of urban trains beginning with horse drawn cars in the very early 1800s and continues with electric and other propulsion systems. The video shows the development of the New York Subway System, BART, and developments in many other cities, some of which are similar to that which happened in the Portland area.

March 15: "The History of the Portland Railway, Light and Power Company" by Richard Thompson. This organization was a major operator of urban and interurban trains from Portland to points south and east. Richard's latest book, *Portland's Interurban Railway*, was released December 3rd by Arcadia Publishing.

NOTABLE NON-CHAPTER EVENTS:

Now - June 30 *Streetcars Build a City*, Exhibit, Architectural Heritage Center, Portland, www.visitahc.org
Now – Apr 14 *All Aboard: Railroading & Portland's Black Community*, Oregon History Museum, www.orhs.org
February 9 *Valentine Train*, Lake Whatcom Railway, Wickersham WA, www.lakewhatcomrailway.com
March 2 *The Pacific Model Loggers' Congress*, 9AM-6PM, Camp 18 Restaurant & Museum, www.pacificmodelloggerscongress.com [a PNWC Concessions Event]
March 9 *Willamette Model Railroad Club's 28th Annual Model Railroad Swap Meet* at the Kliever Memorial Armory 10000 NE 33rd Dr., 10AM to 3PM [a PNWC Concessions Event]
March 10 *2013 Spring Train Show,* Spokane County Fairgrounds, www.inlandnwrailmuseum.com
April 13-14 *Willamette Cascade Model Railroad Club 25th Annual Swap Meet and Train Show*, Eugene, Lane County Fairgrounds [a PNWC Concessions Event]
April 21 *Broadway Bridge 100th Celebration*, www.pdxbridgefestival.org
May 11 *Amtrak's National Train Day,* www.nationaltrainday.com
May 17-19 *Western Pacific Railroad Historical Convention,* Calif. State Railroad Museum, www.wprrhs.rg
May 18 *GorgeRail 2013,* Columbia Gorge Discovery Center, The Dalles OR, www.gorgerail.com
June 16 *Father's Day Special*, Garibaldi – Rockaway, Oregon Coast Scenic Railroad, www.ocsr.net
June 29 *2nd Annual Double Header* (Steam!), Oregon Coast Scenic Railroad, www.ocsr.net
July 4 *Fireworks Spectacular*, Garibaldi – Rockaway, Oregon Coast Scenic Railroad, www.ocsr.net
July 17-20 *NP Railway Historical Society Convention*, Butte MT, www.nprha.org
July 20-21 *Clamshell Railroad Days*, Ilwaco, WA, www.columbiapacificheritagemuseum.org
July 23-27 *UP Historical Society Convention*, Topeka KS, www.uphs.org
July 27-28 *Down River Days Train Ride*, North Pend Oreille Valley Lions Club, www.lionstrainrides.com
July 27-31 *GN Railway Historical Society Convention,* Naperville IL, www.gnrhs.org
July 28 – Aug 3 *RailCamp Northwest*, Tacoma WA, www.nrhs.com
August 16-18 *Snoqualmie Railroad Days*, www.railroaddays.com
August 31-Sept 1 *Affair on Main Street*, North Pend Oreille Valley Lions Club, www.lionstrainrides.com
Sept 19-22 *Milwaukee Road Historical Association* convention, Rockford, IL, www.mrha.com
Oct 2-5 *Southern Pacific Historical & Technical Society Convention*, Fresno CA, www.spht s.org

PNWC – NRHS MISSION
To preserve and interpret Pacific Northwest railroad history and historical artifacts for the education and enjoyment of current and future generations.