



MAY 2011 NEWSLETTER

Introduction to the PVGID

The Palomino Valley General Improvement District (PVGID) is a quasi-municipal corporation responsible for maintaining certain roads in the Palomino Valley/Warm Springs area. This includes most roads in the area, with the major exceptions of Pyramid Highway and Winnemucca Ranch Road. Funding for the PVGID comes from property taxes assessed on properties within the district, as well as a portion of the sales and use taxes collected statewide. Currently, these two funding sources are approximately equal. The estimated income for the PVGID in the 2010-2011 Fiscal Year was \$457,620. We anticipate a reduction in revenues of about \$100,000 in 2011-2012.

The PVGID was formed by Washoe County on July 28, 1973. Its original scope of services included sewerage, drainage and recreational facilities in addition to roadways (which were originally intended to be paved). Changes in development plans for the district and related reductions in projected revenues for the PVGID resulted in reduction of its scope to maintenance of existing roadways only.

The PVGID maintains 95.5 miles of road, of which 9.7 miles are asphalt-surfaced and the remainder is unsurfaced. Maintenance activities are primarily performed by PVGID employees, of which there are currently two, using PVGID-owned equipment.

The PVGID is governed by an un-paid, elected board consisting of five Trustees. Trustees are elected to staggered four-year terms. Elections are held in even-numbered years on the same ballot as other federal, state and local offices. Vacant seats may be filled by appointment by the remaining Trustees, with an election to follow in the next even-numbered year.

Regular meetings of the PVGID board are held on the second Thursday of the month, (except for February and May, when meetings are held on the third Thursday). Notice of the time and location of the meeting, as well as the agenda, is posted at various locations within the district. These notices are also sent out through email - to get on the list, please send an email to palvalgid@gmail.com.

Dust Palliatives/Stabilizers

The PVGID has employed several different types of liquid to reduce dust and maintenance requirements on the more heavily-trafficked, unsurfaced roads within the district. All of these liquids are non-toxic, and Material Safety Data Sheets (MSDS) are available upon request.

Magnesium Chloride ($MgCl_2$) is a salt - the product we buy is a brine produced from evaporation of water from the Great Salt Lake. It works by absorbing small amounts of moisture from the air and thus preventing the road surface from completely drying out. This water binds fine particles (such as silt and clay) together, preventing them from becoming airborne as dust. It also slows corrugation of the surface, also known as washboarding.

The advantage of $MgCl_2$ over other liquids is its low cost. The disadvantages are several: Its effectiveness is limited on roads with a low fines content, in our wet winter conditions it appears to make roads slicker, its effectiveness over time decreases relatively quickly, and it is mildly corrosive, especially to aluminum.

Durablend™ is a mixture of $MgCl_2$ and small quantities of organic polymers intended to prevent the $MgCl_2$ from leaching out of the roadway. In practice we've found that durablend™ is as effective as straight $MgCl_2$ as

a dust palliative. The cost per mile of treated roadway is about the same. However, the effectiveness of durablend™ is maintained longer, the corrosive effect is reduced due to the lower application rate, and it does not appear to make roads slick in the winter. The downside of this product is that it cements the roadway into a hardened surface that is very difficult to re-grade.

EMC Squared is a polymer soil stabilizer. One of its advantages is that it can be delivered in a concentrated form and mixed with water as needed, rather than having to schedule a tanker-truck delivery (which can be difficult in the May-June busy season for these treatments). While we've found that it is a good product for stabilizing the roadway, it does not control dust as well as durablend™ or MgCl₂. Another disadvantage is that it must be worked into the roadway surface, which increases labor and equipment costs.

In 2010 the PVGID used only durablend™. 16.1 miles of roadway (about 19% of the unsurfaced mileage) was treated, all with a single application. We are currently investigating other products, especially ones that may be effective on roads with low fines contents such as Bacon Rind.

We are pleased with the effectiveness in reducing dust and summer maintenance needs of the products we use. However, potholes in the winter, especially wet winters such as this one, continue to be a big problem. We are investigating several options for improving winter road conditions next year, including improving the roadway crown, and applying an additional stabilization treatment in the fall.

Asphalt Roads

The PVGID maintains 9.7 miles of asphalt road, all of which are in poor to extremely poor condition. These roads were paved by Rocketdyne; circa 1956. Although paved roads are typically designed for a 15 to 30 year life, no maintenance other than patching has been performed on these roads since. The first two miles of asphalt pavement on Whiskey Springs (from Pyramid Highway to Grass Valley Road) was removed in 1993.

Responding to the deteriorating condition and increasing cost of patching the remaining asphalt on Whiskey Springs, in 1995 the PVGID consulted with State, County and UNR engineers. The conclusion was that these roads were too far deteriorated to repair, and there were only two options: Either removal of the asphalt surface (i.e. revert to a dirt road) or total reconstruction. Three bids were obtained to reconstruct the remaining asphalt portion of Whiskey Springs Road. Those bids ranged from \$533,000 to \$845,000. In 2007 the PVGID obtained a quote to overlay Axe Handle and Whiskey Springs Road. The quote worked out to \$94,000 per mile for a 2" overlay, not including necessary repairs prior to placement. No action was taken due to lack of funds. Needless to say, these roads have continued to deteriorate.

The PVGID board will be considering repair options at its next several board meetings, and we welcome public input on the subject. A preliminary list of options, with back-of-the-envelope cost estimates, is as follows:

- **Do Nothing:** Continue patching as necessary at the current rate. Last year the PVGID spent approximately \$6700 on patch material and used approximately 340 hours of employee labor.
- **Revert to Gravel:** Pulverize existing pavement, regrade and compact. Estimated \$0.40/SF or \$42,200 per mile.
- **Pulverize and Chipseal:** Pulverize existing pavement, regrade, compact and chipseal. Estimated \$0.70/SF or \$73,900 per mile.
- **Grader Patch:** Apply patch material with grader blade. Assuming 1.5" average thickness, \$98,900 and 90 employee hours per mile.
- **2" overlay:** 2" asphalt concrete overlay with no repair work to existing surface. \$1.50/SF or \$158,000 per mile.
- **Reconstruct:** Pulverize existing pavement, regrade, compact and place 3" asphalt concrete pavement. \$2.30/SF or \$243,000 per mile.

These numbers are rough estimates, but are included here to illustrate the cost of various options relative to each other and the PVGID budget. As we proceed further we will develop more precise estimates. One further note is that these estimates do not include shoulder, drainage and other improvements of roadside features, which may be necessary, especially on Axe Handle Road.

In order to implement some of these options, the PVGID would need to issue bonds. The regulations and costs associated with a bond issue is something we will be investigating further.

Wayside and Ironwood Special Use Permits

The Wayside Road site was used as a quarry by the original developer (McCulloch Properties, Inc.) for road construction materials since the early 1970s. The GID purchased the parcel in 1989 and has used the pre-existing quarry for road surfacing materials since that time.

A Special Use Permit (SUP) was granted by Washoe County in 1993, but due to the inattention of past GID boards, was allowed to lapse in 1996. In approximately 1993 the County changed zoning designations for the entirety of the County and incorrectly rezoned this parcel, thereby making our operations illegal. In 2010, homeowner complaints to the County over the operation of the facility resulted in "red tagging" of the entire facility, bringing all operations, including road maintenance, to a halt. The County required the parcel to be rezoned, followed by a Special Use Permit application, both of which took several months to prepare and process, followed by public hearings, and further review by the County's Design Review Committee.

In order to resume limited operations while the rezoning and the SUP were being processed, a temporary permit to operate was issued. This allowed our road crew to get back to work and catch up on road maintenance and repair. Now that the rezoning and the SUP have been approved, design plans are being completed for grading, electrical, plumbing, and landscaping for submittal to the County for

building permits. Construction cost estimates are being prepared for budgeting purposes.

Similar rezoning and a Special Use Permit were required and approved for the Ironwood Water Truck Fill Station site, located at the corner of Ironwood Road and Pyramid Highway. Design plans are nearly finalized, and will soon be submitted to the building department.

It is the goal of the board to have the water truck improvements, at both Ironwood and Wayside, completed by early June when water for dust suppression is most needed. The board has also formulated a critical date list that will flag future deadlines to keep GID operations in compliance with agency requirements. Mistakes have been made in the past; it is the goal of this board to not repeat these in the future.

Board Meeting Location

The PVGID board is legally required to meet within its district at a place that accommodates all members of the public who wish to attend. Due to the general lack of public buildings within Palomino Valley, these requirements have presented difficulties.

The regular meeting place for the board has been the PVGID office trailer on Wayside Road. When that facility was red-tagged, the meeting location was moved to the Volunteer Firehouse on Ironwood Road. However the Fire Department no longer allows meetings to be held there because the building does not meet ADA requirements. The last few meetings of the board have been held at the Air Sailing Gliderport off of Winnemucca Ranch Road.

The board hopes that in the future it can meet in a public building at the Shooting Range off of Pyramid Highway. Before it can do so, the building must be transferred from the Sheriff's Department to the Parks and Open Space Department. It is anticipated that this will happen by the time of the PVGID's May meeting.

Palomino Valley General Improvement District
PO BOX 615
SPARKS, NV 89432-0615