# Additional Sheet
# 2025 Annual Report
# Coal Creek Resources
# M-1988-044
# Schmidt Construction Company
# Anniversary Date: March 28

**OVERALL STATUS:** Unlike what was reported in 2024, this last year was very much the opposite. In general the overall weather pattern during the growing season was moderately dry to dry with only occasional rains. The Autumn of 2024 was unusually dry and by the time winter came the soils were fairly parched region wide with moderate to high fire hazard. Although there was one good snowstorm in Autumn it was certainly not enough to make up for deficits in soil moisture. The rest of the Autumn and Winter was definitely on the dry side. Small snowstorms came at a good frequency but were often accompanied by strong winds which simply caused what snow fell to sublimate rather than melt into the ground. This accentuated the generally dry soil conditions. The year 2024 was definitely an unfavorable growth year, but not as bad as some recent years.

Early 2025 was a continuance of the generally dry end of 2024. Frequent high wind events occurred through the winter and that elevated the fire hazard considerably plus dried out the soils which would adversely affect the growth come Spring.

**SITE CONDITION:** The site was inspected on March 21 to see what the condition of the land was at the end of the 2024-2025 permit year. Following is a description of each of portions of the permit - The Plant Site and then The Pit Area.

**The Plant Site** showed a continued development of the vegetation that was seen in the previous years. In fact, the site has good vegetation cover with both moderate growths of the planted species and robust growth of the native Witch Grass (*Panicum capillare* L.) and some other species. Even the most eroded and erosive areas have now been stabilized with only minor soil losses in the last year. Cuts up to 10 or more inches deep that were abundant and carried a good deal of water in 2024 are now nearly stabilized with erosion of the sides into the cut which is filling it in.

With luck it is possible this part of the permit may be ready for release later this year. However, the "Whiplash" Climatic Pattern that now has a grip on Eastern Colorado, predictions for the future are increasingly speculative. The flip-flop from violent, flooding rains to bone dry drought periods makes it very difficult for even the native vegetation to maintain a healthy condition.

**The Pit Area**, unfortunately, is quite a different story in some respects, but also shows some excellent advances. Of course the same adverse growth conditions applied here as they did at the nearby Plant Site, however, the site is not showing large amounts of rill and gully erosion and even sheet erosion is mild at worst. In fact, the site is amazingly stable even though there is a general lack of strong vegetation growth. This probably reflects the lack of powerful, erosive storms on the site. At the time of the inspection the soil moisture was good due to a recent wet snowfall which was probably only the second or third all winter long. Otherwise, this site probably received the same small, dry powder snows during the winter where most of the snow simply sublimates rather than melts. Little moisture benefit results.

One of the disadvantages of this site is that an extensive grazing lease covers the same land that is being reclaimed (note: there are also a couple of other leases on this same land). It would be useful to completely fence off the pit area during revegetation, but one cannot be sure that would actually help that much as the growing conditions are fundamentally poor to bad. The natural vegetation is doing OK, but it too is drought affected. On the plus side the rancher who holds the lease is managing the grazing pretty well so that over grazing is not occurring on the native vegetation. Unfortunately, that does not help the pit area which has very little of the desired growth due to it being open. About the only way to reclaim this land completely is to limit the grazing to areas around the pit with strong fencing all the way around the pit and then hopefully plant the area during a good year followed by protecting it from grazing for several years. Unfortunately, that creates a conflict between lessees. It removes many acres from the grazing lease for several years.

On the plus side, the flow of water out of the pit is hardly even noticeable at the outlet from the pit. As the comparison photos show, when the climate was wetter the outlet was showing some erosion. Now, the cattle seem to be using the outlet as a trail between the pit area and the adjacent grazing land across the drainage. This has effectively stabilized the outlet and the significant erosion in this area has been reduced by the cattle walking back and forth along the flow path. In fact, the outlet looks better now than it did a couple of years ago and it appears far less sediment is being discharged from the pit.

Of course, a good deal of the improvement in the outlet is due to the general increased stability of the pit slopes and the lack of runoff due to a combination of a better surface and a general lack of strong storms that create high discharge rates, i.e. the climate is drying significantly, at least in the short term. This is a part of the regional “whiplash” climate patterns that are becoming more common, especially along the Front Range but is much less common further east. However, the pattern does seem to show some signs of expanding eastward. In short, Climate Change appears to be occurring rapidly in this part of Colorado.

One item of concern is that it would be nice if the grazing lessee did not drive his vehicles over the pit slopes. As the photos show, a significant road is present across the west side of the pit. There is also a significant horse trail as well, but one can’t do a lot about the horses. However, vehicles should **NOT** be

driven on the pit surface as it has not been released and the permit still applies to this land. Cattle and horses - OK. But **PLEASE** keep the vehicles off of the pit slopes. The climate could change and the roadway could become a severe erosion area.

Finally, the weed control performed in the summer of 2024 was very effective. However, a bit more will likely be needed this year as a number of rosettes of Scotch Thistle were noted during the inspection. But it will be a much reduced problem in 2025 at both the plant site and the pit area. More regarding the weed population can be determined in a month of two after the rosettes are able to grow a bit more and are more visible.

Although there are still some significant problems with meeting the ideal revegetation, considering the truly adverse climatic conditions of the last couple of years, not much more could be achieved even if planting was done. That is simply because the growth conditions have not been favorable for revegetation of the type planned. It is possible that using introduced species might be more favorable, but that is not the plan which calls for using native species to achieve the vegetation condition described in the lease. Introduced species are often more durable in these conditions than natives or perhaps a blend of a couple of competitive native species and a few introduced species might create an acceptable result. However, to do any additional planting will require removal of the Pit Area from the grazing area for a minimum of three years and perhaps five if these dry conditions continue. In short, the ecological conditions on the site are no longer favorable for the current revegetation plan in the permit which was designed by agreement between the Land Board, DRMS, and the operator, but without input from the grazing lessee. Perhaps a new seeding plan is needed. But the current plan would be difficult to successfully implement now, assuming it was feasible even at the time the grading and topsoiling was completed. There is good evidence that may not have been the case.

**LONG TERM SEASONAL CLIMATIC OUTLOOK:** Included with the additional information is the long term seasonal climatic outlook produced and maintained by the National Climate Center which is a part of the National Weather Service and NOAA. These predictions which are relied upon by many industries to judge what to expect for the future, provide a window into the future that has a reasonable degree of reliability for regional prediction.

Unfortunately, this outlook calls for widespread heat over much of the United States for 2025 and even early 2026. Precipitation is much more variable, as is usually the case, because it is much more difficult to predict in long term models. But for the next 5 to 6 months which is the growing season, Colorado is not in an area that is expected to be reasonably normal except for a few periods over the summer and into the fall.

Most of the time Colorado is shown as continuing in the below normal zone which has been pretty much the case for the last three years. Keep in mind this is for liquid water and assumes normal snow-water ratios for snowfall and normal sublimation losses.

These conditions are not at all favorable for successful revegetation programs except for very drought tolerant species. In these conditions, heavy mulching may not produce the desired results when combined with high heat. The success of organic mulches is dependent on reasonably normal precipitation. With below normal precipitation the mulch can often act as a wick and can dry out the limited moisture in the soil.

So, in conclusion, the next year does not look favorable for very successful revegetation programs unless they happen to be in a specific location that differs greatly from the regional prediction. That can always happen, but the higher the probability of unfavorable conditions the lower the probability any one location will be in a favorable location.

**Photo 1:** Panoramic view of Plant Site reclamation status 03-21-25. Black line is approximate western limit of reclamation.

**Photo 2:** This photo is of the revegetation on the somewhat steeper slope between the top of the Plant Site and the lower portions where the sediment basins were located, the slope was seeded up and down the slope rather than following the contour as the seeding contractor was instructed to do. This initially created a heavily rilled slope with new grass plants on the high ridges and nothing growing in between the planted soil. This photo shows how the planted grasses have come in well on the actual drilled stripes and *Panicum capillare* (Witch grass which is a native invader), along with other plants, have filled in the eroded areas between the successful plantings. If the planting had been done laterally the growth would have likely reached this stage a couple of years earlier, but the final result would likely have been the same. Goes to show that even when mistakes are made the revegetation process can still correct itself - sometimes, but no always.

**Photo 3:** Pit outlet on June 28, 2023: At this time the outlet of the drainage from the entire pit area was not only showing some sheet erosion, but also some continued development of vegetation within the channel. Obviously, the grading was holding very well in spite of 2023 being a fairly wet year. However further up in the outlet note the dark areas.Those are erosional holes in the outlet that had developed but had not fully developed yet. The main erosion effect here was sheet erosion. The drainage upstream was in excellent condition with no rilling, gully formation, or other adverse erosional damages.That shows that the pit slopes were not discharging much sediment that was leaving the pit area in spite of most of the vegetation at this time being mostly weed species due to the failure of the planting.

**Photo 4:** Here is the pit outlet on March 21, 2025. It actually looks very much the same as it did in 2023. The churning of the soil is due to the cattle using the outlet as a path between the pit area to the south and the native grassland on the other side of a fairly deep drainage separating the two areas. This has been in use for some time and shows high stability in spite of the increased disturbance compared to 2023.

THE OVERALL conclusion of this is that drainage from the pit area is not showing significant erosion at all in spite of the weak vegetation cover. This is also borne out by the lack of rill erosion in the pit area. However, it is recognized this apparent stability could change with a very large thunderstorm.

**Photo 5:** Although the grazing lessee grazes mostly cattle, they do have a few horses. Here is the horse trail the horses follow from the ranch (on the horizon) to the richer grasslands for grazing this time of the year. In summer they often stay in the pit area. Unlike cattle, horses have a tendency to follow each other in a line rather than spread out. Thus they create trails where the soil is trampled.

**Photo 6:** Here is the location further along on the horse trail where the trail merges with the “road” that goes toward the outlet of the pit.

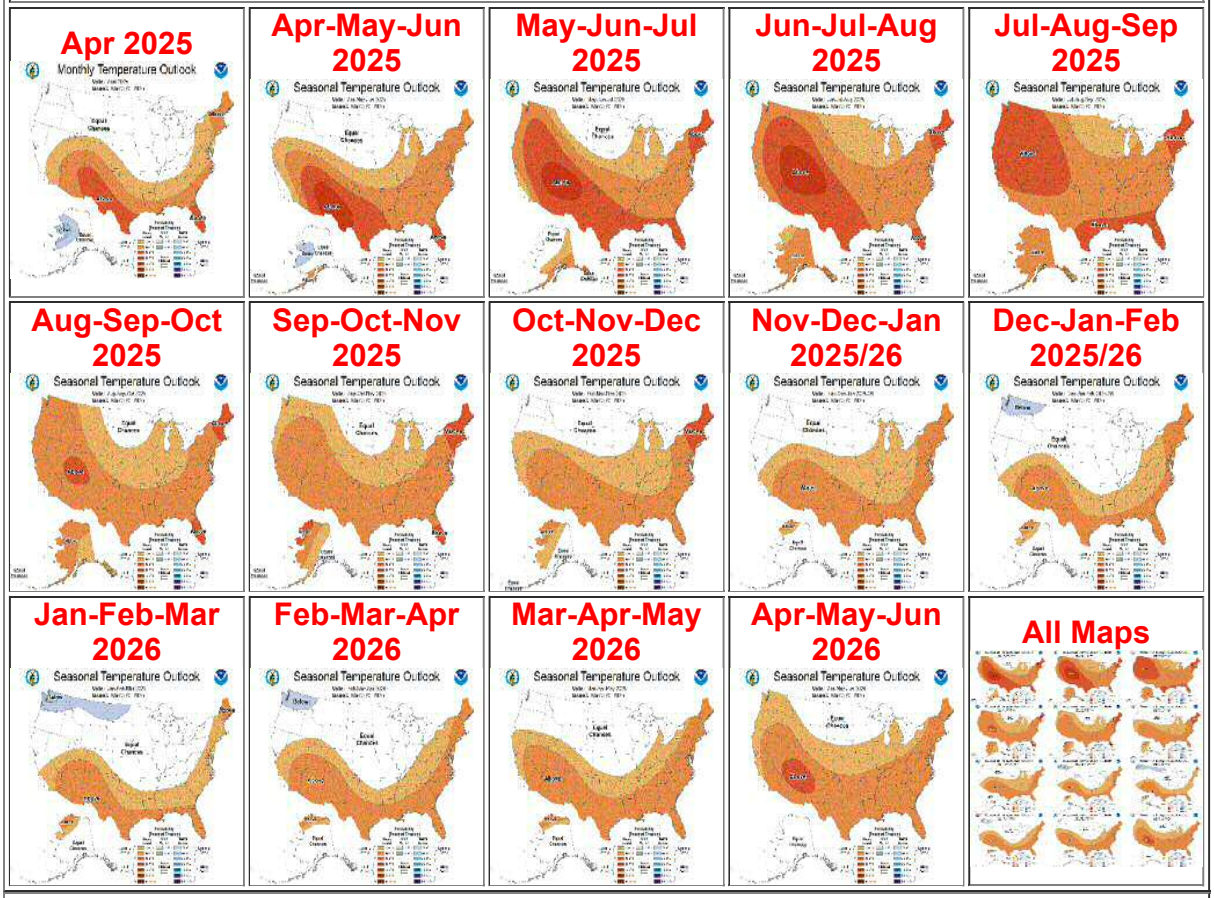
**NOTE:** IT IS CERTAINLY PREFERRED THAT DRIVING ACROSS THE STILL PERMITTED AREA WOULD **NOT** BE DONE, A LIMITED AMOUNT OF THIS IS PROBABLY OK. AS LEASES ON THE LOWRY RANGE OFTEN HAVE CONSIDERABLE OVERLAP. AS EACH LESSEE IS LEASING THE ENTIRE AREA DESCRIBED IN THEIR LEASE, DOUBLE UTILIZATION OF THE LAND MAY OCCUR. IF THE PIT AREA WERE SEEDED AGAIN THIS DOUBLE USE WOULD NEED TO CEASE FOR A FEW YEARS WHILE THE VEGETATION IS DEVELOPING.

# Monthly & Seasonal Color Outlook Maps

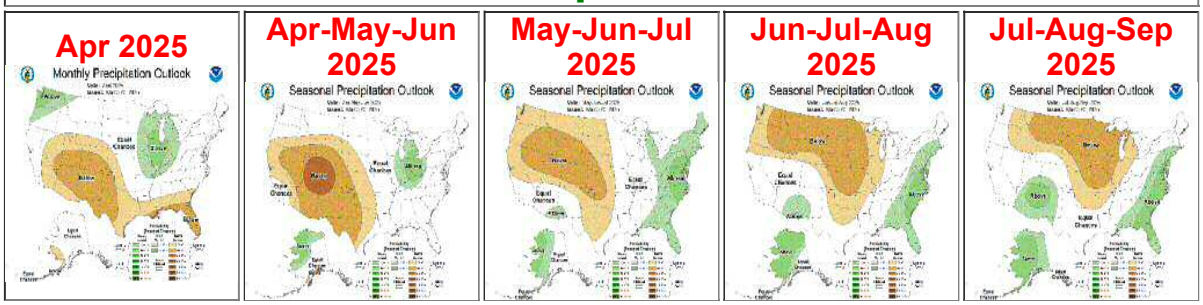
**Issued: 20 Mar 2025**

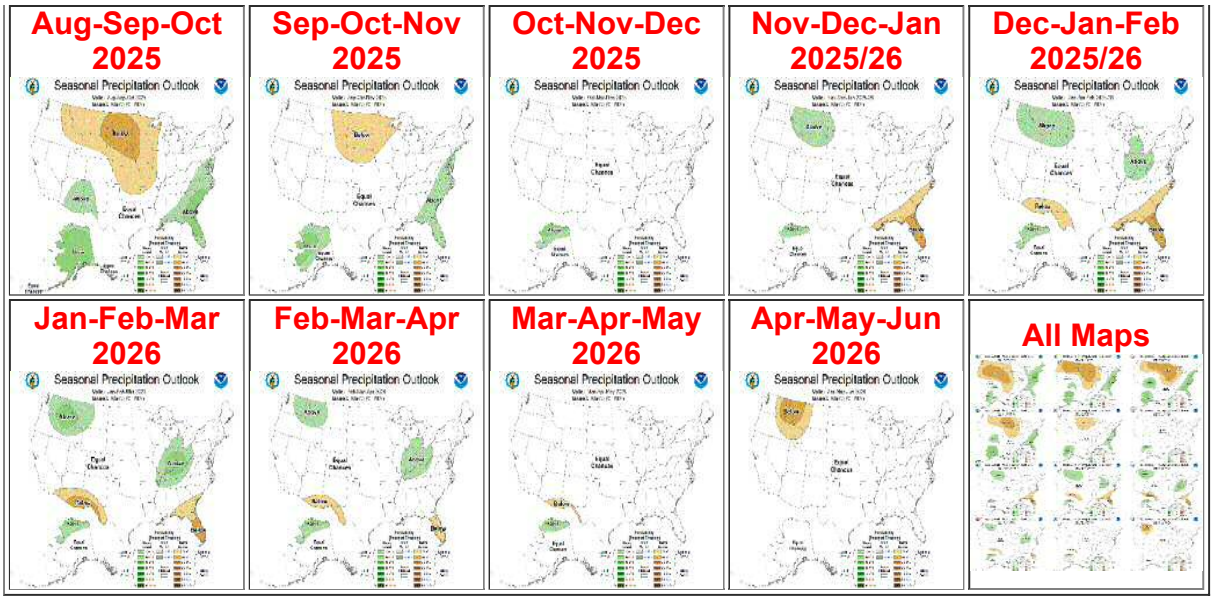
**[EXPERIMENTAL TWO-CLASS SEASONAL FORECASTS]**

## Temperature




## Precipitation



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