



Derrick Braaten
Partner

derrick@baumstarkbraaten.com

109 N. 4th Street, Suite 100
Bismarck, ND 58501
Phone: 701-221-2911
Fax: 701-221-5842
www.baumstarkbraaten.com

November 4, 2016

Mr. Darrell Nitschke, Executive Secretary
North Dakota PSC
600 East Boulevard Ave, Dept 408
Bismarck, ND 58505-4080

Via email and U.S. Mail

**Re: Sacagawea Pipeline Company, LLC
16-inch Crude Oil Pipeline – McKenzie & Mountrail
Case No. PU-16-582**

Commissioners:

Enclosed for filing is a Response to Sacagawea Pipeline Company's Supplemental Response Letter in Case No. PU-16-582, filed on behalf of Laborers District Council.

Sincerely,

A handwritten signature in blue ink, appearing to read "Derrick Braaten", is written over a horizontal line.

Derrick Braaten

Copy: Illona Jeffcoat Sacco (*via email to ijs@nd.gov*)
Lawrence Bender (*via email to lbender@fredlaw.com*)
Danielle Krause (*via email to dkrause@fredlaw.com*)
Zachary Pelham (*via email to zep@pearce-durick.com*)

Enclosures



**LABORERS DISTRICT COUNCIL
MINNESOTA AND NORTH DAKOTA**

Affiliated with Laborers International Union
of North America

81 E Little Canada Road • St Paul, Minnesota 55117
Ph (651) 653-9776 • Fax (651) 653-9745 • council@mnldc.org

TODD T. PUFAHL
President & Business Manager

**Response to Sagawea Pipeline Company Supplemental Response Letter (ND PSC Docket
No. PU-16-582)**

November 1, 2016

Mr. Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission
600 East Boulevard Avenue, Dept. 408
Bismarck, ND 58505-4080

Dear Mr. Nitschke:

The following is the response of the Laborers District Council of Minnesota and North Dakota to the Supplemental Response Letter filed by the Sacagawea Pipeline Company on September 22, 2016 in response to evidence submitted by our organization and the Commission's third-party inspector.

Overview

The Public Service Commission has now received three separate reports that document clearly substandard practices on the Sacagawea Pipeline right-of-way: two from the Commission's third-party inspector Wenck Associates ("Wenck"), and one from the Laborers District Council of Minnesota and North Dakota ("LDC"). These reports summarize findings from eight separate inspections, including two conducted by LDC (7/12, 7/14), five conducted by Wenck (3/15, 3/22, 5/12, 5/17, 7/21), and one conducted jointly (9/1). The most remarkable aspect of the observations contained in the reports, which span many months and miles of right-of-way, is the consistency with which the evidence points to substandard work that appears to fall far short of the requirements and expectations set out by the Commission and other regulators for the construction of transmission pipelines.

The only response we have seen from Sacagawea Pipeline Company (SCP) to date is a brief letter signed by Paradigm Energy Partners Chief Operating Officer Criss Doss. The letter argues, without providing any actual evidence, that the problems documented by Wenck and LDC 1) are not really violations; 2) should be excused because they are attributable to circumstances beyond the company's control (e.g. rain, wind); or are moot because they have (probably) already been corrected. In a couple of instances, the letter even takes apparently inconsistent positions regarding a particular problem, such as when it is argued that unsafe operation of an excavator near overhead power lines may not have happened, yet also implied that the operator in question was likely let go.

We have carefully reviewed all of Mr. Doss's objections to the extensive evidence of substandard work supplied by Wenck and LDC, and conclude that the objections not only are unsupported by evidence but frequently contradicted by evidence that was already provided or can easily be obtained (such as weather data). We also believe that the substantial body of evidence available to the Commission should be sufficient to dismiss what appears to be Mr. Doss's main defense: that the inspections caught the project on a very bad day, or more accurately a series of very bad days.

Unfortunately, the problems documented by Wenck and LDC are clearly too widespread and persistent for the Commission to accept excuses that are no better grounded than the student who claims repeatedly that the dog ate his homework. In our view, failure by the Commission to take action on these matters could send a message to applicants that environmental and safety requirements established by law and commission order can be ignored without consequence.

Topsoil management

Mr. Doss's letter essentially ignores a troubling report filed by Wenck in August that provides extensive evidence of substandard topsoil management practices. The report's overall findings included "poor topsoil stripping/removal to the correct depth on hilltops and other areas", as well as areas where subsoil was observed "touching the topsoil pile," or "on the topsoil pile." Problems were evidently identified and brought to the attention of the company's environmental inspectors during Wenck's first inspection (3/15).

Yet problems continued some two months later (5/12), when a third inspection yielded evidence of "subsoil and topsoil piles touching, subsoil on top of the topsoil piles, and poor topsoil stripping in areas." Few observations were apparently possible during Wenck's July 21 visit because the contractor's "loss of the county road permit" for reasons unknown to us. We urge the Commission to enforce topsoil management requirements that were put in place to protect landowners and prevent the type of right-of-way damage that has made pipelines increasingly difficult to cite in North Dakota.

Unprotected wetland

Both the LDC and Wenck reported evidence that vehicles had been taken across wetland (Whiteford Aff. 8-9, Wenck Photo 23). Doss does not seem to have responded to the Wenck photo (the response to Photo 23 evidently refers instead to Photo 24), but states in response to the Whiteford Affidavit that "even if the depicted area is jurisdictional wetland, a Nationwide Permit 12 permits construction through wetlands where the total disturbance is less than 0.10 acres."

This answer makes little sense, however, because the section of ROW in question appears to have bored rather than trenched, which suggests that the plan was to protect the wetland from damage, not run over it with heavy machinery. Further, in our experience responsible contractors know that heavy equipment should never be moved across unprotected wetland, regardless of the legal requirements. Given the seriousness of this issue, we strongly urge the Commission to investigate the circumstances to determine whether the activity was permitted and why it happened.

“Recent, major precipitation event” and “windy weather conditions”

Mr. Doss alleges that the LDC’s photographs of right-of-way areas where erosion controls are poorly-maintained or missing entirely “suggest a recent, major, precipitation event, with no current or post rain construction activity” which could result in “an inaccurate portrayal of the true conditions”. Yet weather data obtained from WeatherSource.com shows no evidence of such an event in the days prior to July 12 and 14 inspections. The largest 24-hour rainfall recorded by the Keene 4 S and Stanley 3 NNW in the week before the first photographs were taken (July 4-11) was just over a third of an inch (0.36 inches on July 4-5), and total rainfall during the period was less than an inch in both locations.

North Dakota’s construction stormwater discharge permit requires that stormwater controls “withstand and function properly” during a two-year 24-hour storm event which is described as 1.9 inches in the western part of the state. In other words, erosion controls along the Sacagawea right-of-way should have been able to withstand roughly six times the amount reported by the weather stations. Further, if the July 4-5 precipitation were the cause of the damage, it should have been repaired long before the photos were taken.

The Stanley weather station did report a somewhat larger precipitation event in which nearly a half-inch of rain fell (0.47 inches), but it took place on July 16-17 a couple of days after the photos were taken, which raises the real possibility of uncontained erosion during the event.

Mr. Doss makes the same flawed case with respect to evidence of poorly-maintained erosion controls that was gathered by Wenck. For example, Mr. Doss appears to suggest that the poor condition of the silt fence in Wenck Photo 7 (Report 2, 15) is a probable result of “multiple storms, traditional for the July season.”

Once again, however, Mr. Doss’s timing is badly off. The Keene 4 S Station did not report a single 24-hour rain event greater than 0.21 inches in the two-week period prior to the inspection (July 6-20). Instead, the largest rain event recorded in the month of July occurred on July 22-23, little more than 24 hours after the photo was taken. (The largest rain event reported by Stanley 3 NNW, which appears to lie further from the observation point, prior to the inspection was 0.47 inches on July 16-17, which still should not explain the condition of the silt fence.) Similarly, very little rain was reported by either station in the 10 days prior to the September 1 inspection.

Mr. Doss speculates that the poorly-maintained silt fence was “likely repaired prior to the next event”. That seems unlikely to be true, however, given the frequency with which evidence of substandard erosion control practices has been observed by both LDC and Wenck. The burden is on SCP to provide hard evidence (inspections reports and work orders, not unsubstantiated claims) that these conditions were identified and fixed between the time the photos were taken and succeeding precipitation events. Further, we hope SCP will finally take responsibility for the poor condition of ROW erosion controls since the evidence does not bear out the notion that it was caused by a recent, major precipitation event.

Mr. Doss uses another weather-related justification, “windy weather conditions”, to explain the poor condition of safety fences depicted at multiple locations in the Whiteford Affidavit. While we would not dispute that the weather is windy in North Dakota, the wind should come as no surprise, and it does not excuse SCP or Boyd from their responsibility to protect workers and the public from fall hazards. The Wenck inspector made similar observations regarding sections of ROW where excavations were left partly or completely unprotected (Photos 12, 13). It should be noted that these observations come from roadsides and public access points, which residents using local roads might have been endangered.

“Muddy right-of-ways”

Mr. Doss also attempts to excuse SCP’s evident failure to properly install and maintain erosion controls by arguing that “inspectors and work crews are proscribed from driving on muddy right-of-ways (“ROW”) to further avoid erosion.” It should be obvious from the photographs taken by both LDC and Wenck that the ROW was not particularly muddy.

Even if conditions were muddy, however, that would not relieve the company of the responsibility to control erosion. When driving is not an option, responsible contractors send environmental crews out to repair erosion control devices on foot – sometimes for miles – carrying tools and materials with them. The state’s pollution control permit requires corrective action within 24 hours or “as soon as field conditions allow”, and the conditions depicted in the photos would clearly have allowed crews to be deployed, on foot if not in vehicles.

A similar argument is employed to excuse evidence that SCP failed to properly maintain a flooded section of the ROW. While Doss claims that “the landowner requested that SPC delay reclaiming the area until it had dried”, the least the contractor could have done would be to send a crew out to recover the mats that were left floating in what appears to be a wetland. An experienced crew could easily have accomplished this without causing permanent damage to the terrain. The photos also raise the question of whether the pipeline was properly routed through an area that is evidently so susceptible to flooding.

“Existing vegetation”

The excuse Mr. Doss uses most often for what is clearly the failure of SCP to consistently install and maintain erosion controls is the existence of vegetation that he suggests serves, or might serve, as a sufficient BMP (Wenck Photos 2, 3, 4, 7, 16, 17, 21). Mr. Doss is correct that a vegetated buffer can serve as an erosion control. But he fails to provide evidence that the vegetation depicted in the photos meets the requirements of the state’s stormwater discharge permits, which specify that the buffer must “consist of dense grassy vegetation, 3 to 12 inches tall with uniform coverage over 90 percent of the buffer.” Mr. Doss also seems, based on our review of photos, to be claiming what clearly appears to be wetland vegetation as a buffer, as if the wetland could serve as its own BMP.

For example, in his response to Wenck Photo 16 Mr. Doss notes that “sufficient vegetative cover between surface waters and the disturbance may be considered a BMP.” Mr. Doss does not clarify exactly where in the photo a sufficient buffer can be found, but most of the plants between the ROW and the open water appear to be wetland vegetation that should be protected from erosion. A similar claim is made by Mr. Doss with respect to Wenck Photo 22 where the vegetation that is claimed as “cover” appears instead to be part of the wetland.

Mr. Doss uses the same excuse in areas where Wenck documented drainage areas, one a potential wetland, where no erosion control devices were present (Wenck Photos 2-4, 17). In the first case (Wenck Photos 2-4), the plants in question appear to be wetland vegetation that could be damaged by erosion from the ROW. In the second case (Wenck Photo 17), Mr. Doss claims that the photo’s background “indicates that an adequate vegetative cover exists beyond the ROW”. Yet we can find no evidence in the photo of “dense grassy vegetation... with uniform coverage over 90 percent of the buffer” sufficient to prevent soil from washing down the drainage. Mr. Doss does not specifically allege sufficient vegetated buffers exist in the erosion control photos supplied by LDC, but our review of the photos suggests to us that the vegetation depicted there either consists of wetland plants or is insufficiently dense to meet the BMP requirements.

Pipe left on the ground

Mr. Doss does not dispute that work crews left segments of pipe on the ground, but asserts that the segments are “likely” pipeline “pups,” i.e. short lengths of pipe, or partial joints that had been cut as part of the construction process” and therefore “surplus waiting to be retrieved”. Mr. Doss further contends that, “even if any of the depicted pipe were not surplus... their coatings would have been inspected and any defects remedied prior to subsequent use.”

Mr. Doss’s response is insufficient or even misleading in key respects. First, while the pipe segments on page 4 of the Whiteford affidavit are obviously “pups”, this fact does not relieve the contractor of the responsibility to handle them properly because pups are often carried forward to complete other tie-ins and should therefore be handled in the same manner as full-length joints.

Second, even a cursory look at the photos should make clear that most of the pipes captured on pages 2 and 3 of the Whiteford affidavit are not “pups” but rather full-length joints which would typically be carried forward and installed further up the line. In our experience, capable contractors make maximum use of each piece of pipe and handle each joint and “pup” accordingly.

Third, the suggestion that pipe can safely be left on the ground because any damage will be “remedied prior to subsequent use” betrays a troubling lack of familiarity with the basics of pipeline construction. Damaging and then repairing the factory coating not only wastes time and money, but also has the potential to weaken the integrity of the pipe because new anomalies can be created during the process of holiday detection and recoating.

Fourth, and most importantly, the Commission has substantial reason to doubt whether Paradigm and Boyd can be relied upon to consistently and properly inspect and repair pipe coating given the uncontested testimony of former Boyd employees regarding the handling of the bore pipe that was installed under Lake Sakakawea.

Once again, the burden clearly falls on SCP to provide documentary evidence that the particular pipes in question were either scrapped or properly repaired. We encourage the Commission to request such evidence from SCP, along with clarification of the policies SCP communicated to its contractors with regard to how pipe should be handled in order to determine whether SCP authorized Boyd to leave pipe on the ground.

Safety

In addition to providing evidence of excavations with missing or poorly-maintained safety fence, LDC also provided evidence of apparent failures in the area of traffic control and unsafe operation of an excavator near overhead power lines. Further, Mr. Crase observed that the project had safety problems including the use of “incredibly steep, unsafe bore pits”.

Mr. Doss’s letter appears to admit to problems with “signage issues”, claiming that they have been addressed with contractors, but he does not provide details or evidence that would make clear whether the problems persisted. With respect to the excavator, Mr. Doss suggests that it is “impossible to tell whether work is actually occurring” while inferring that if true, it may be the work of an excavator who was “terminated for unsafe work practices.”

In order to clarify the matter, we have provided a better version of the photo, which was taken on July 14 and clearly shows that the operator is in his machine (see below). We encourage the Commission to request that SCP clarify the matter by providing details and evidence regarding the excavator who was terminated, including dates and locations that would make it possible to determine whether the excavator in the photo is the one who was terminated, and how long he was allowed to operate unsafely.



Photo of Sacagawea Pipeline construction near 53rd Street NE east of Highway 8 in Mountrail County on July 14, 2016

Mr. Doss responds to Mr. Crase's statement regarding safety by asserting without evidence that the pits were OSHA compliant. Mr. Doss attempts to support his assertion by observing that "OSHA has been actively onsite during construction of the Sacagawea Pipeline". Yet it is no secret that OSHA staffing and the frequency of inspections is limited in North Dakota, so we believe this claim should be backed up with specifics that would clarify how much of the 80-plus mile project was observed by OSHA and on how many occasions.

Inspections

The frequency, persistence, and seriousness of the problems documented on the right-of-way by Wenck and LDC strongly suggest that the project operated under a lax and ineffective inspection regime. This conclusion is also supported by the sworn testimony of Kenny Crase, who states that "a lot of times the inspectors weren't around to inspect the work."

Mr. Doss disputes Mr. Crase's, citing what he views as an apparent contradiction between that statement and his reference to "two different inspection companies" and "multiple coating inspectors". But there is nothing contradictory in Mr. Crase's testimony that inspectors, when present, gave his crew inconsistent guidance, while at other times, they were not present to inspect the work.

Hiring multiple inspection companies to inspect different sections of right-of-way does not strengthen an inspection regime, nor does hiring multiple inspectors who give conflicting guidance. Mr. Crase's statement suggests, instead, that the inspection process on the pipeline was poorly managed, and may also have been thinly staffed.

Under a robust inspection regime, the right-of-way problems that appear to be all-too-common should have been identified and solved without the involvement of Wenck or LDC. Further, with the help of a robust inspection program, SCP should be able to easily identify and explain each of the problems documented by Wenck and LDC, rather than provide the kind of vague and highly speculative answers that characterize Mr. Doss's letter.

It should also be noted that, if an inspection company signed off on installation of the Lake Sakakawea bore pipe without running a holiday detector on the pipe as it was entering the bore, as stated by Mr. Crase and Mr. Graham, that circumstance alone should raise serious questions about the competence and integrity of the inspection company and inspection process.

Troubling conditions persist

The most disturbing aspect of the evidently substandard work performed by SCP mainline contractor is the persistence of problems despite the best efforts of LDC and Wenck to bring them to the attention of SCP and the Commission. A visit conducted to the right-of-way just two days ago suggests many of the problems many continue to this day, as should be clear from the enclosed photos, which were taken on October 30, 2016.

The photo below, taken in the vicinity of 47th Street NW east of 82nd Avenue Northwest, shows an area where it is evident that sediment has clearly run off the right-of-way into a drainage, likely because the straw log was installed too late and/or was insufficient to contain erosion. In our view, a silt fence should have been in place, and we think the Commission will find that this photo corresponds to photo 21 of the Wenck's Construction Inspection report where the lack of adequate erosion control is noted.



The two photos below show the same area east of 87th Avenue NW where poorly maintained silt fence was documented in the Whiteford affidavit (p. 9-10). The photos show not only that the silt fence is still poorly-maintained, but worse, that sediment is apparently running under it.





The photo below was taken in the vicinity of 53rd Street NW east of Highway 8, and we believe that it is the same area depicted in Wenck Construction Inspection report Photo 16, which identified a lack of erosion control devices. The photo shows that a straw log has been installed (recently judging by the color), but apparently only after equipment was tracked through the area based on the crushed vegetation under and in the background of the log. In our view, a silt fence would have been more appropriate, and construction equipment should always be kept on the right-of-way and off vegetation.



The last photo, which was taken near the location where the right-of-way crosses 49th Street NW, shows a new cause for concern where construction activity appears to have disturbed a significant wetland area. The right-of-way does not appear to have been routed or necked-down in a manner that might have minimized the environmental impact.



Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kevin Pranis'.

Kevin Pranis
Marketing Manager

Official Weather: New Town Nd

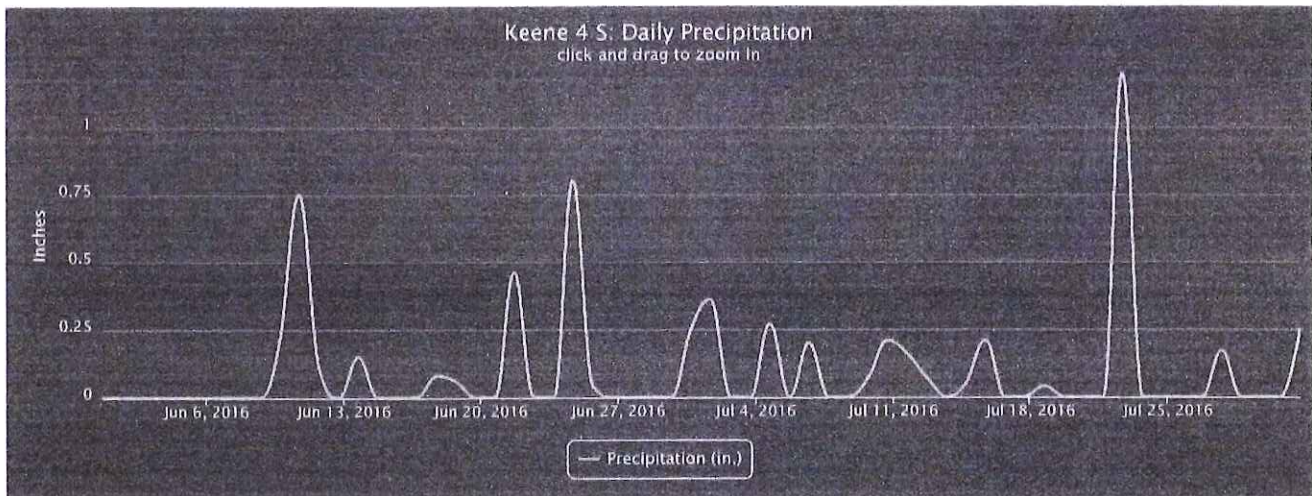
[view the tutorial video](#)

Data Sources

This weather data comes from the United States Government's National Oceanic and Atmospheric Administration (NOAA), specifically, the National Climatic Data Center (NCDC) and the National Weather Service (NWS). Data compiled from these government sources is widely regarded as reliable and authoritative and used in our industry as standard and acceptable to rely on. The data is quality controlled by both NCDC and Weather Source.

Weather Station Information

| | | | |
|---------------|-----------------|--------------------|--------|
| Station Name: | Keene 4 S | Weather Source ID: | 26852 |
| City: | Keene, ND 58847 | NWS ID: | KNEN8 |
| Latitude: | 47.8967° | COOP ID: | 324571 |
| Longitude: | -102.921° | | |
| Elevation: | 2469 ft. | | |



| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|----------------|---------|--------------|
| 5/31/2016 17:00 | 6/1/2016 17:00 | 0.00 | |
| 6/1/2016 17:00 | 6/2/2016 17:00 | 0.00 | |
| 6/2/2016 17:00 | 6/3/2016 17:00 | 0.00 | |
| 6/3/2016 17:00 | 6/4/2016 17:00 | 0.00 | |
| 6/4/2016 17:00 | 6/5/2016 17:00 | 0.00 | |
| 6/5/2016 17:00 | 6/6/2016 17:00 | 0.00 | |
| 6/6/2016 17:00 | 6/7/2016 17:00 | 0.00 | |
| 6/7/2016 17:00 | 6/8/2016 17:00 | 0.00 | |

| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|-----------------|---------|--------------|
| 6/8/2016 17:00 | 6/9/2016 17:00 | 0.00 | |
| 6/9/2016 17:00 | 6/10/2016 17:00 | 0.21 | |
| 6/10/2016 17:00 | 6/11/2016 17:00 | 0.75 | |
| 6/11/2016 17:00 | 6/12/2016 17:00 | 0.11 | |
| 6/12/2016 17:00 | 6/13/2016 17:00 | 0.00 | |
| 6/13/2016 17:00 | 6/14/2016 17:00 | 0.15 | |
| 6/14/2016 17:00 | 6/15/2016 17:00 | 0.00 | |
| 6/15/2016 17:00 | 6/16/2016 17:00 | 0.00 | |
| 6/16/2016 17:00 | 6/17/2016 17:00 | 0.00 | |
| 6/17/2016 17:00 | 6/18/2016 17:00 | 0.08 | |
| 6/18/2016 17:00 | 6/19/2016 17:00 | 0.06 | |
| 6/19/2016 17:00 | 6/20/2016 17:00 | 0.00 | |
| 6/20/2016 17:00 | 6/21/2016 17:00 | 0.00 | |
| 6/21/2016 17:00 | 6/22/2016 17:00 | 0.46 | |
| 6/22/2016 17:00 | 6/23/2016 17:00 | 0.00 | |
| 6/23/2016 17:00 | 6/24/2016 17:00 | 0.00 | |
| 6/24/2016 17:00 | 6/25/2016 17:00 | 0.80 | |
| 6/25/2016 17:00 | 6/26/2016 17:00 | 0.04 | |
| 6/26/2016 17:00 | 6/27/2016 17:00 | 0.00 | |
| 6/27/2016 17:00 | 6/28/2016 17:00 | 0.00 | |
| 6/28/2016 17:00 | 6/29/2016 17:00 | 0.00 | |
| 6/29/2016 17:00 | 6/30/2016 17:00 | 0.00 | |
| 6/30/2016 17:00 | 7/1/2016 17:00 | 0.25 | |
| 7/1/2016 17:00 | 7/2/2016 17:00 | 0.36 | |
| 7/2/2016 17:00 | 7/3/2016 17:00 | 0.00 | |
| 7/3/2016 17:00 | 7/4/2016 17:00 | 0.00 | |
| 7/4/2016 17:00 | 7/5/2016 17:00 | 0.27 | |
| 7/5/2016 17:00 | 7/6/2016 17:00 | 0.00 | |
| 7/6/2016 17:00 | 7/7/2016 17:00 | 0.20 | |
| 7/7/2016 17:00 | 7/8/2016 17:00 | 0.00 | |
| 7/8/2016 17:00 | 7/9/2016 17:00 | 0.00 | |
| 7/9/2016 17:00 | 7/10/2016 17:00 | 0.07 | |
| 7/10/2016 17:00 | 7/11/2016 17:00 | 0.21 | |
| 7/11/2016 17:00 | 7/12/2016 17:00 | 0.16 | |
| 7/12/2016 17:00 | 7/13/2016 17:00 | 0.07 | |
| 7/13/2016 17:00 | 7/14/2016 17:00 | 0.00 | |
| 7/14/2016 17:00 | 7/15/2016 17:00 | 0.05 | |
| 7/15/2016 17:00 | 7/16/2016 17:00 | 0.21 | |
| 7/16/2016 17:00 | 7/17/2016 17:00 | 0.00 | |
| 7/17/2016 17:00 | 7/18/2016 17:00 | 0.00 | |
| 7/18/2016 17:00 | 7/19/2016 17:00 | 0.04 | |
| 7/19/2016 17:00 | 7/20/2016 17:00 | 0.00 | |
| 7/20/2016 17:00 | 7/21/2016 17:00 | 0.00 | |
| 7/21/2016 17:00 | 7/22/2016 17:00 | 0.00 | |
| 7/22/2016 17:00 | 7/23/2016 17:00 | 1.20 | |
| 7/23/2016 17:00 | 7/24/2016 17:00 | 0.00 | |
| 7/24/2016 17:00 | 7/25/2016 17:00 | 0.00 | |
| 7/25/2016 17:00 | 7/26/2016 17:00 | 0.00 | |
| 7/26/2016 17:00 | 7/27/2016 17:00 | 0.00 | |
| 7/27/2016 17:00 | 7/28/2016 17:00 | 0.17 | |
| 7/28/2016 17:00 | 7/29/2016 17:00 | 0.00 | |
| 7/29/2016 17:00 | 7/30/2016 17:00 | 0.00 | |
| 7/30/2016 17:00 | 7/31/2016 17:00 | 0.00 | |
| 7/31/2016 17:00 | 8/1/2016 17:00 | 0.25 | |

Table Legend

Begin Time

Begin date/time (in Local Time) for the period summarized by the corresponding row

Official Weather: Keene Nd

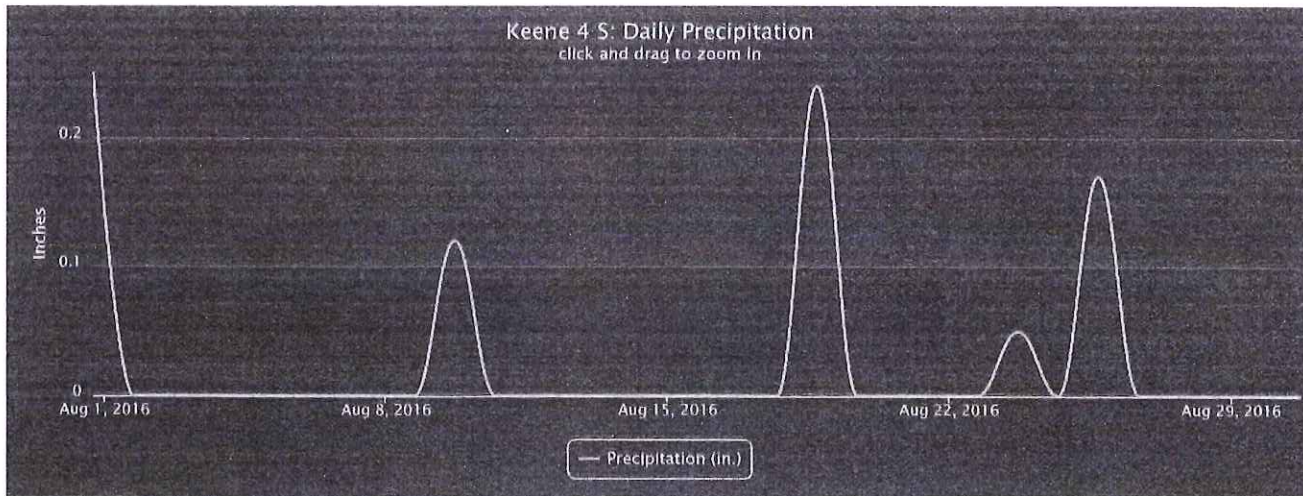
[view the tutorial video](#)

Data Sources

This weather data comes from the United States Government's National Oceanic and Atmospheric Administration (NOAA), specifically, the National Climatic Data Center (NCDC) and the National Weather Service (NWS). Data compiled from these government sources is widely regarded as reliable and authoritative and used in our industry as standard and acceptable to rely on. The data is quality controlled by both NCDC and Weather Source.

Weather Station Information

| | | | |
|---------------|-----------------|--------------------|--------|
| Station Name: | Keene 4 S | Weather Source ID: | 26852 |
| City: | Keene, ND 58847 | NWS ID: | KNEN8 |
| Latitude: | 47.8967° | COOP ID: | 324571 |
| Longitude: | -102.921° | | |
| Elevation: | 2469 ft. | | |



| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|----------------|---------|--------------|
| 7/31/2016 17:00 | 8/1/2016 17:00 | 0.25 | |
| 8/1/2016 17:00 | 8/2/2016 17:00 | 0.00 | |
| 8/2/2016 17:00 | 8/3/2016 17:00 | 0.00 | |
| 8/3/2016 17:00 | 8/4/2016 17:00 | 0.00 | |
| 8/4/2016 17:00 | 8/5/2016 17:00 | 0.00 | |
| 8/5/2016 17:00 | 8/6/2016 17:00 | 0.00 | |
| 8/6/2016 17:00 | 8/7/2016 17:00 | 0.00 | |
| 8/7/2016 17:00 | 8/8/2016 17:00 | 0.00 | |

| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|-----------------|---------|--------------|
| 8/8/2016 17:00 | 8/9/2016 17:00 | 0.00 | |
| 8/9/2016 17:00 | 8/10/2016 17:00 | 0.12 | |
| 8/10/2016 17:00 | 8/11/2016 17:00 | 0.00 | |
| 8/11/2016 17:00 | 8/12/2016 17:00 | 0.00 | |
| 8/12/2016 17:00 | 8/13/2016 17:00 | 0.00 | |
| 8/13/2016 17:00 | 8/14/2016 17:00 | 0.00 | |
| 8/14/2016 17:00 | 8/15/2016 17:00 | 0.00 | |
| 8/15/2016 17:00 | 8/16/2016 17:00 | 0.00 | |
| 8/16/2016 17:00 | 8/17/2016 17:00 | 0.00 | |
| 8/17/2016 17:00 | 8/18/2016 17:00 | 0.00 | |
| 8/18/2016 17:00 | 8/19/2016 17:00 | 0.24 | |
| 8/19/2016 17:00 | 8/20/2016 17:00 | 0.00 | |
| 8/20/2016 17:00 | 8/21/2016 17:00 | 0.00 | |
| 8/21/2016 17:00 | 8/22/2016 17:00 | 0.00 | |
| 8/22/2016 17:00 | 8/23/2016 17:00 | 0.00 | |
| 8/23/2016 17:00 | 8/24/2016 17:00 | 0.05 | |
| 8/24/2016 17:00 | 8/25/2016 17:00 | 0.00 | |
| 8/25/2016 17:00 | 8/26/2016 17:00 | 0.17 | |
| 8/26/2016 17:00 | 8/27/2016 17:00 | 0.00 | |
| 8/27/2016 17:00 | 8/28/2016 17:00 | 0.00 | |
| 8/28/2016 17:00 | 8/29/2016 17:00 | 0.00 | |
| 8/29/2016 17:00 | 8/30/2016 17:00 | 0.00 | |
| 8/30/2016 17:00 | 8/31/2016 17:00 | 0.00 | |

Table Legend

- Begin Time Begin date/time (in Local Time) for the period summarized by the corresponding row
- End Time End date/time (in Local Time) for the period summarized by the corresponding row
- Precip. Total precipitation in inches ¹
- Precip. Flag Flag to indicate trace precipitation ²

Footnotes

- 1 If precipitation includes snowfall or other frozen/winter precipitation types, the melted liquid equivalent is reported.*
- 2 prcpFlag will sometimes contain the "trace" flag for trace amounts of precipitation. Trace means a very small amount fell, but was not enough to measure. Examples include, a sprinkle, snow flurry or mist.*

Official Weather: Stanley, Nd

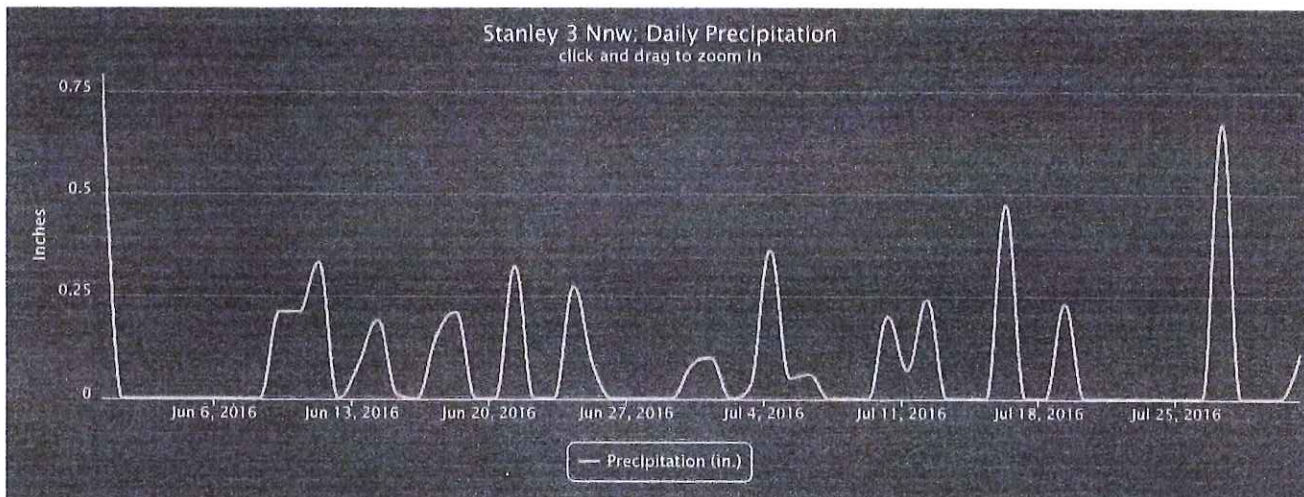
[view the tutorial video](#)

Data Sources

This weather data comes from the United States Government's National Oceanic and Atmospheric Administration (NOAA), specifically, the National Climatic Data Center (NCDC) and the National Weather Service (NWS). Data compiled from these government sources is widely regarded as reliable and authoritative and used in our industry as standard and acceptable to rely on. The data is quality controlled by both NCDC and Weather Source.

Weather Station Information

| | | | |
|---------------|-------------------|--------------------|--------|
| Station Name: | Stanley 3 Nnw | Weather Source ID: | 17804 |
| City: | Stanley, ND 58784 | NWS ID: | STAN8 |
| Latitude: | 48.3567° | COOP ID: | 328276 |
| Longitude: | -102.413° | | |
| Elevation: | 2279 ft. | | |



| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|----------------|---------|--------------|
| 5/31/2016 07:00 | 6/1/2016 07:00 | 0.79 | |
| 6/1/2016 07:00 | 6/2/2016 07:00 | 0.00 | |
| 6/2/2016 07:00 | 6/3/2016 07:00 | 0.00 | |
| 6/3/2016 07:00 | 6/4/2016 07:00 | 0.00 | |
| 6/4/2016 07:00 | 6/5/2016 07:00 | 0.00 | |
| 6/5/2016 07:00 | 6/6/2016 07:00 | 0.00 | |
| 6/6/2016 07:00 | 6/7/2016 07:00 | 0.00 | |
| 6/7/2016 07:00 | 6/8/2016 07:00 | 0.00 | |

| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|-----------------|---------|--------------|
| 6/8/2016 07:00 | 6/9/2016 07:00 | 0.00 | |
| 6/9/2016 07:00 | 6/10/2016 07:00 | 0.21 | |
| 6/10/2016 07:00 | 6/11/2016 07:00 | 0.21 | |
| 6/11/2016 07:00 | 6/12/2016 07:00 | 0.33 | |
| 6/12/2016 07:00 | 6/13/2016 07:00 | 0.00 | |
| 6/13/2016 07:00 | 6/14/2016 07:00 | 0.08 | |
| 6/14/2016 07:00 | 6/15/2016 07:00 | 0.19 | |
| 6/15/2016 07:00 | 6/16/2016 07:00 | 0.01 | |
| 6/16/2016 07:00 | 6/17/2016 07:00 | 0.00 | trace |
| 6/17/2016 07:00 | 6/18/2016 07:00 | 0.15 | |
| 6/18/2016 07:00 | 6/19/2016 07:00 | 0.21 | |
| 6/19/2016 07:00 | 6/20/2016 07:00 | 0.00 | |
| 6/20/2016 07:00 | 6/21/2016 07:00 | 0.00 | |
| 6/21/2016 07:00 | 6/22/2016 07:00 | 0.32 | |
| 6/22/2016 07:00 | 6/23/2016 07:00 | 0.00 | |
| 6/23/2016 07:00 | 6/24/2016 07:00 | 0.00 | |
| 6/24/2016 07:00 | 6/25/2016 07:00 | 0.27 | |
| 6/25/2016 07:00 | 6/26/2016 07:00 | 0.08 | |
| 6/26/2016 07:00 | 6/27/2016 07:00 | 0.00 | |
| 6/27/2016 07:00 | 6/28/2016 07:00 | 0.00 | |
| 6/28/2016 07:00 | 6/29/2016 07:00 | 0.00 | |
| 6/29/2016 07:00 | 6/30/2016 07:00 | 0.00 | |
| 6/30/2016 07:00 | 7/1/2016 07:00 | 0.08 | |
| 7/1/2016 07:00 | 7/2/2016 07:00 | 0.10 | |
| 7/2/2016 07:00 | 7/3/2016 07:00 | 0.00 | trace |
| 7/3/2016 07:00 | 7/4/2016 07:00 | 0.03 | |
| 7/4/2016 07:00 | 7/5/2016 07:00 | 0.36 | |
| 7/5/2016 07:00 | 7/6/2016 07:00 | 0.05 | |
| 7/6/2016 07:00 | 7/7/2016 07:00 | 0.06 | |
| 7/7/2016 07:00 | 7/8/2016 07:00 | 0.00 | trace |
| 7/8/2016 07:00 | 7/9/2016 07:00 | 0.00 | |
| 7/9/2016 07:00 | 7/10/2016 07:00 | 0.00 | |
| 7/10/2016 07:00 | 7/11/2016 07:00 | 0.20 | |
| 7/11/2016 07:00 | 7/12/2016 07:00 | 0.07 | |
| 7/12/2016 07:00 | 7/13/2016 07:00 | 0.24 | |
| 7/13/2016 07:00 | 7/14/2016 07:00 | 0.00 | |
| 7/14/2016 07:00 | 7/15/2016 07:00 | 0.00 | trace |
| 7/15/2016 07:00 | 7/16/2016 07:00 | 0.00 | |
| 7/16/2016 07:00 | 7/17/2016 07:00 | 0.47 | |
| 7/17/2016 07:00 | 7/18/2016 07:00 | 0.00 | |
| 7/18/2016 07:00 | 7/19/2016 07:00 | 0.00 | |
| 7/19/2016 07:00 | 7/20/2016 07:00 | 0.23 | |
| 7/20/2016 07:00 | 7/21/2016 07:00 | 0.00 | |
| 7/21/2016 07:00 | 7/22/2016 07:00 | 0.00 | |
| 7/22/2016 07:00 | 7/23/2016 07:00 | 0.00 | |
| 7/23/2016 07:00 | 7/24/2016 07:00 | 0.00 | |
| 7/24/2016 07:00 | 7/25/2016 07:00 | 0.00 | |
| 7/25/2016 07:00 | 7/26/2016 07:00 | 0.00 | |
| 7/26/2016 07:00 | 7/27/2016 07:00 | 0.00 | |
| 7/27/2016 07:00 | 7/28/2016 07:00 | 0.67 | |
| 7/28/2016 07:00 | 7/29/2016 07:00 | 0.00 | |
| 7/29/2016 07:00 | 7/30/2016 07:00 | 0.00 | |
| 7/30/2016 07:00 | 7/31/2016 07:00 | 0.00 | |
| 7/31/2016 07:00 | 8/1/2016 07:00 | 0.11 | |

Table Legend

Begin Time

Begin date/time (in Local Time) for the period summarized by the corresponding row

Official Weather: Stanley Nd

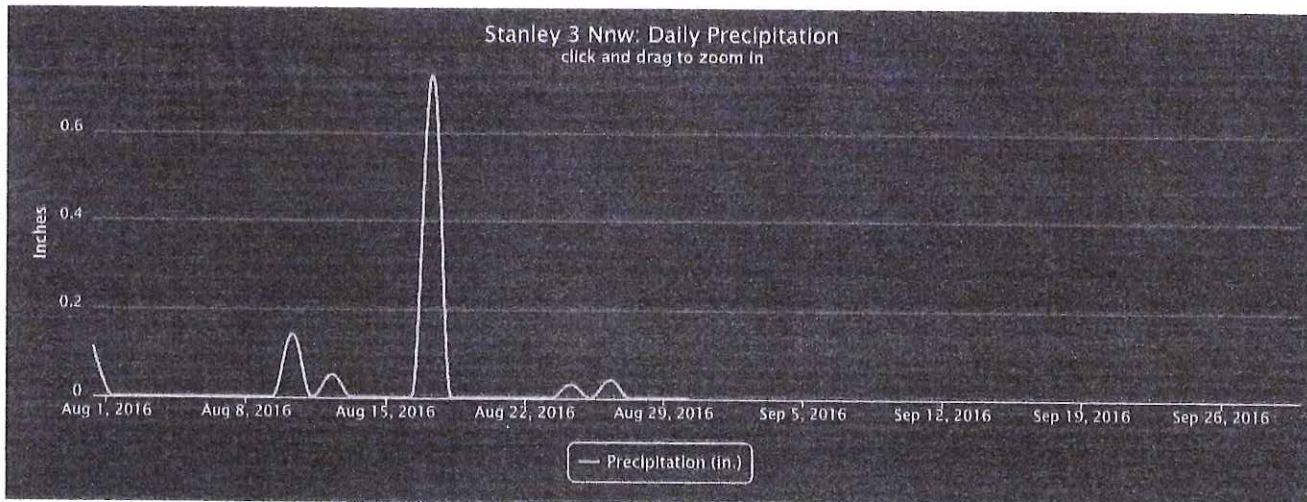
[view the tutorial video](#)

Data Sources

This weather data comes from the United States Government's National Oceanic and Atmospheric Administration (NOAA), specifically, the National Climatic Data Center (NCDC) and the National Weather Service (NWS). Data compiled from these government sources is widely regarded as reliable and authoritative and used in our industry as standard and acceptable to rely on. The data is quality controlled by both NCDC and Weather Source.

Weather Station Information

| | | | |
|---------------|-------------------|--------------------|--------|
| Station Name: | Stanley 3 Nnw | Weather Source ID: | 17804 |
| City: | Stanley, ND 58784 | NWS ID: | STAN8 |
| Latitude: | 48.3567° | COOP ID: | 328276 |
| Longitude: | -102.413° | | |
| Elevation: | 2279 ft. | | |



| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|----------------|---------|--------------|
| 7/31/2016 07:00 | 8/1/2016 07:00 | 0.11 | |
| 8/1/2016 07:00 | 8/2/2016 07:00 | 0.00 | trace |
| 8/2/2016 07:00 | 8/3/2016 07:00 | 0.00 | |
| 8/3/2016 07:00 | 8/4/2016 07:00 | 0.00 | |
| 8/4/2016 07:00 | 8/5/2016 07:00 | 0.00 | |
| 8/5/2016 07:00 | 8/6/2016 07:00 | 0.00 | |
| 8/6/2016 07:00 | 8/7/2016 07:00 | 0.00 | |
| 8/7/2016 07:00 | 8/8/2016 07:00 | 0.00 | |

| Begin Time | End Time | Precip. | Precip. Flag |
|-----------------|-----------------|---------|--------------|
| 8/8/2016 07:00 | 8/9/2016 07:00 | 0.00 | |
| 8/9/2016 07:00 | 8/10/2016 07:00 | 0.00 | trace |
| 8/10/2016 07:00 | 8/11/2016 07:00 | 0.14 | |
| 8/11/2016 07:00 | 8/12/2016 07:00 | 0.00 | |
| 8/12/2016 07:00 | 8/13/2016 07:00 | 0.05 | |
| 8/13/2016 07:00 | 8/14/2016 07:00 | 0.00 | |
| 8/14/2016 07:00 | 8/15/2016 07:00 | 0.00 | |
| 8/15/2016 07:00 | 8/16/2016 07:00 | 0.00 | |
| 8/16/2016 07:00 | 8/17/2016 07:00 | 0.00 | |
| 8/17/2016 07:00 | 8/18/2016 07:00 | 0.73 | |
| 8/18/2016 07:00 | 8/19/2016 07:00 | 0.00 | trace |
| 8/19/2016 07:00 | 8/20/2016 07:00 | 0.00 | |
| 8/20/2016 07:00 | 8/21/2016 07:00 | 0.00 | |
| 8/21/2016 07:00 | 8/22/2016 07:00 | 0.00 | |
| 8/22/2016 07:00 | 8/23/2016 07:00 | 0.00 | |
| 8/23/2016 07:00 | 8/24/2016 07:00 | 0.00 | |
| 8/24/2016 07:00 | 8/25/2016 07:00 | 0.03 | |
| 8/25/2016 07:00 | 8/26/2016 07:00 | 0.00 | |
| 8/26/2016 07:00 | 8/27/2016 07:00 | 0.04 | |
| 8/27/2016 07:00 | 8/28/2016 07:00 | 0.00 | |
| 8/28/2016 07:00 | 8/29/2016 07:00 | 0.00 | |
| 8/29/2016 07:00 | 8/30/2016 07:00 | 0.00 | |
| 8/30/2016 07:00 | 8/31/2016 07:00 | 0.00 | |
| 9/1/2016 00:00 | 9/2/2016 00:00 | | |
| 9/2/2016 00:00 | 9/3/2016 00:00 | | |
| 9/3/2016 00:00 | 9/4/2016 00:00 | | |
| 9/4/2016 00:00 | 9/5/2016 00:00 | | |
| 9/5/2016 00:00 | 9/6/2016 00:00 | | |
| 9/6/2016 00:00 | 9/7/2016 00:00 | | |
| 9/7/2016 00:00 | 9/8/2016 00:00 | | |
| 9/8/2016 00:00 | 9/9/2016 00:00 | | |
| 9/9/2016 00:00 | 9/10/2016 00:00 | | |
| 9/10/2016 00:00 | 9/11/2016 00:00 | | |
| 9/11/2016 00:00 | 9/12/2016 00:00 | | |
| 9/12/2016 00:00 | 9/13/2016 00:00 | | |
| 9/13/2016 00:00 | 9/14/2016 00:00 | | |
| 9/14/2016 00:00 | 9/15/2016 00:00 | | |
| 9/15/2016 00:00 | 9/16/2016 00:00 | | |
| 9/16/2016 00:00 | 9/17/2016 00:00 | | |
| 9/17/2016 00:00 | 9/18/2016 00:00 | | |
| 9/18/2016 00:00 | 9/19/2016 00:00 | | |
| 9/19/2016 00:00 | 9/20/2016 00:00 | | |
| 9/20/2016 00:00 | 9/21/2016 00:00 | | |
| 9/21/2016 00:00 | 9/22/2016 00:00 | | |
| 9/22/2016 00:00 | 9/23/2016 00:00 | | |
| 9/23/2016 00:00 | 9/24/2016 00:00 | | |
| 9/24/2016 00:00 | 9/25/2016 00:00 | | |
| 9/25/2016 00:00 | 9/26/2016 00:00 | | |
| 9/26/2016 00:00 | 9/27/2016 00:00 | | |
| 9/27/2016 00:00 | 9/28/2016 00:00 | | |
| 9/28/2016 00:00 | 9/29/2016 00:00 | | |
| 9/29/2016 00:00 | 9/30/2016 00:00 | | |
| 9/30/2016 00:00 | 10/1/2016 00:00 | | |

Table Legend

Begin Time Begin date/time (in Local Time) for the period summarized by the corresponding row
 End Time End date/time (in Local Time) for the period summarized by the corresponding row