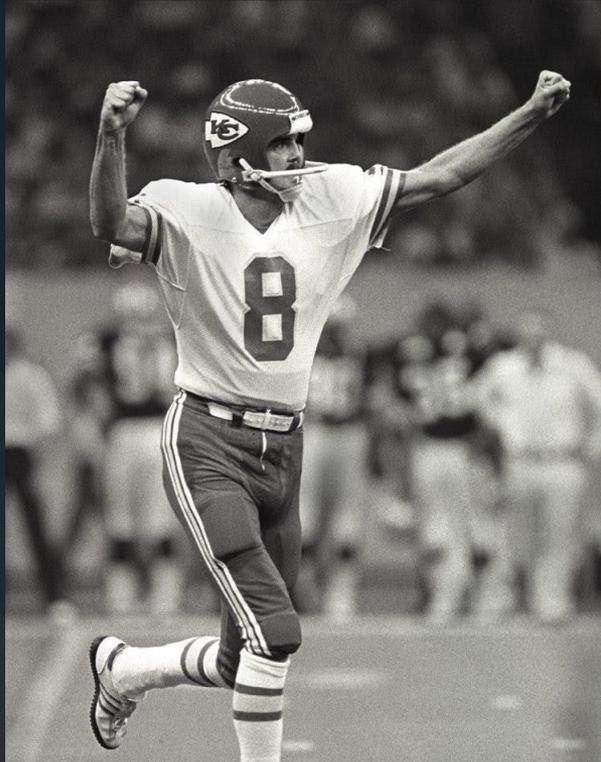


Nick Lowery



**Portfolio for Induction
into the Pro Football
Hall of Fame**

By the St. Albans School
Sports Analytics Club
Washington, DC

Our Purpose

As students of St. Albans School, we take pride in our alumni and their achievements, striving to help them to succeed as much as we can. Nick Lowery, an alumnus of St. Albans School, had an exemplary career in the NFL, shining for the Kansas City Chiefs and New York Jets.

Recognizing this world class career, we developed this advanced statistical analysis presentation proving that Lowery belongs with the NFL greats enshrined in the Pro Football Hall of Fame.



Research Description

For this project, we compared the careers and accomplishments of Jan Stenerud and Morten Andersen, the only two pure placekickers in the Pro Football Hall of Fame, to that of Nick Lowery.

To complete the analysis we compiled data on every kick attempted in each player's NFL career. We then further researched the conditions under which each kick was taken adding additional data points to each kick. The additional factors considered were: cold (under 50°F), wind (>10 MPH), indoors/outdoors, and clutch situations.



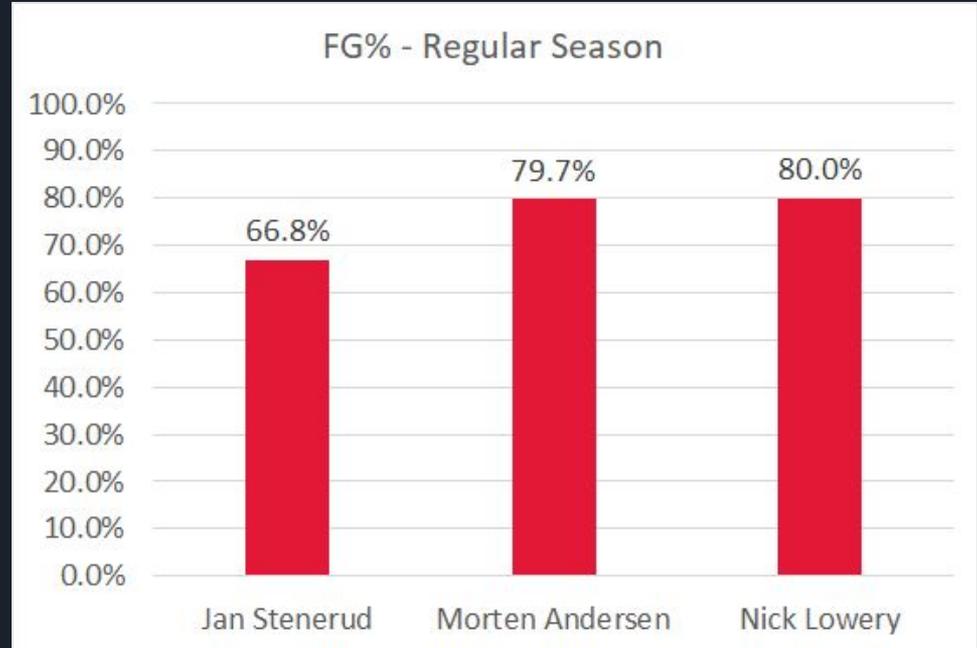
Nick Lowery Accomplishments

- Most accurate placekicker in NFL history from 1980 to 1999
- Most 50 yard field goals made in NFL history at time of retirement
- Most total field goals in NFL history at time of retirement
- Three games with two 50 yard field goals
- First placekicker with three field goals over 57 yards
- Still holds the NFL record for the longest field goal in the first quarter (58 yards)
- First placekicker with two consecutive seasons with 21 straight field goals
- Beat out Hall of Famer Jan Stenerud in head to head competition



Regular Season FG%

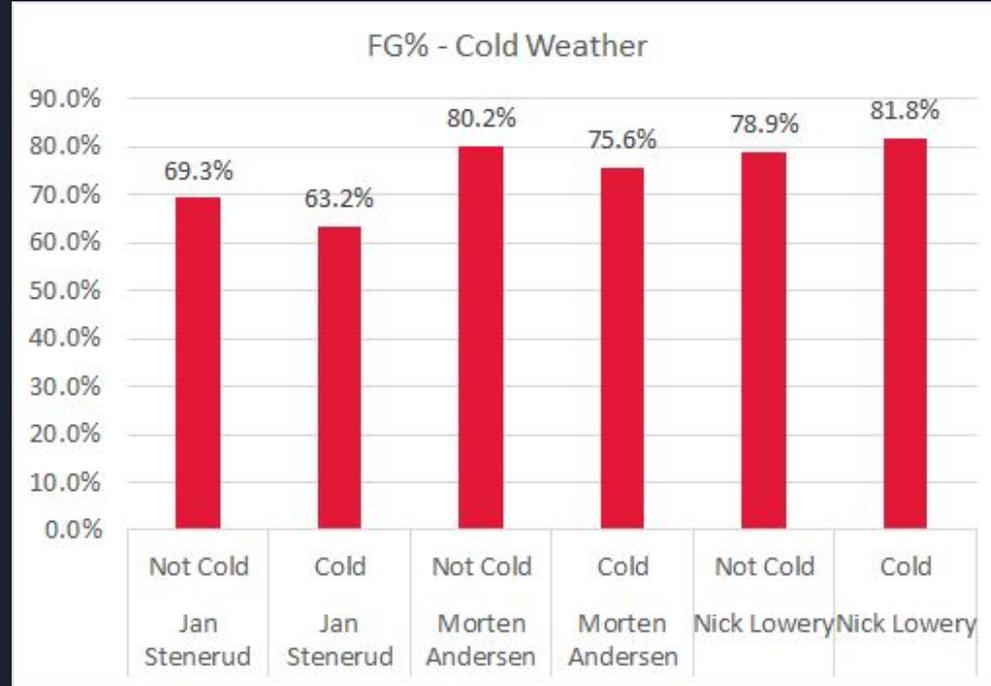
- As compared to Stenerud and Andersen, Nick Lowery's regular season career field goal percentage is the highest of the three at 80.0%.



Lowery's field goal percentage is better than the only two pure placekickers in the Hall of Fame

Field Goals in Cold

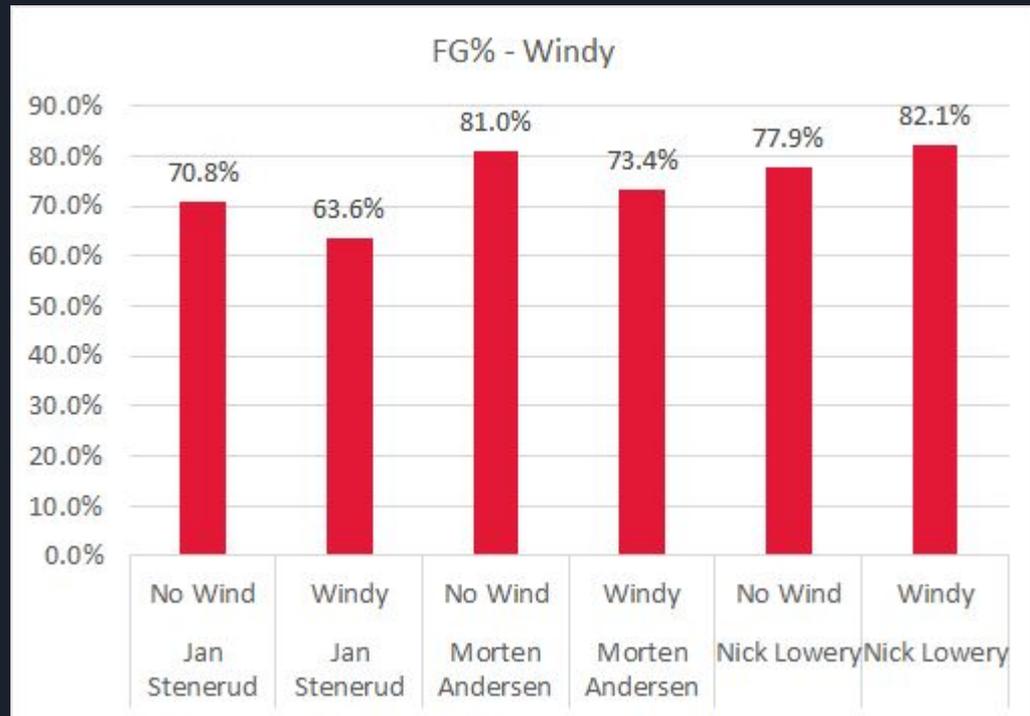
- Cold weather is defined as below 50 degrees Fahrenheit.
- Kicking is generally much harder in the cold, but as shown on the graph, Lowery's percentage in these harsh conditions actually increases, and is substantially better than both Stenerud and Andersen.
- Lowery's sample size in cold weather is large (176 attempts), so he was excellent over a large number of attempts.



In cold weather, Lowery had a higher field goal percentage than both Andersen and Stenerud.

Field Goals in Wind

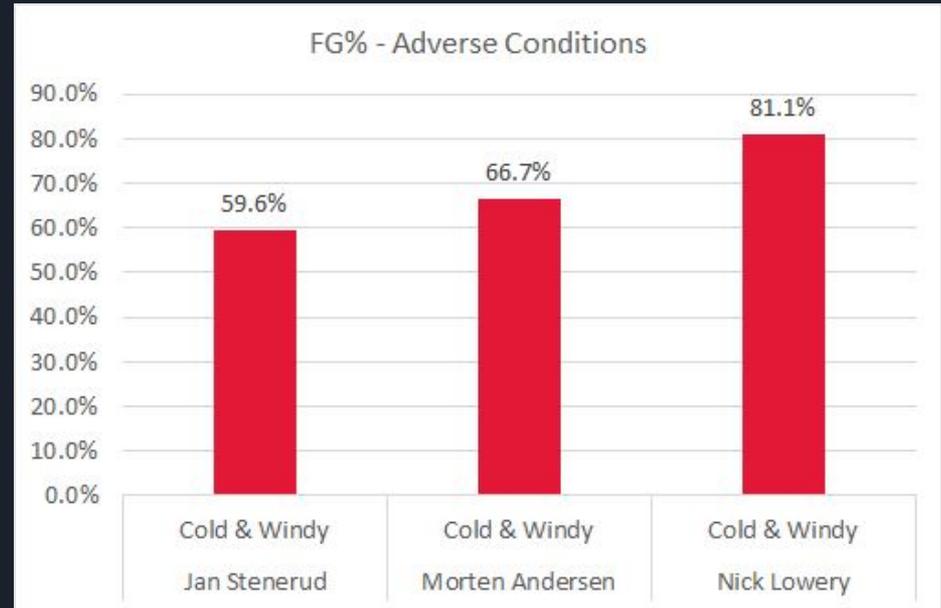
- Windy conditions are defined as conditions in which the wind is over 10 MPH.
- Similar to cold, kicking is generally much harder in the wind.
- While the accuracy of Andersen and Stenerud drops off sharply in the wind, Lowery is even more accurate in windy conditions than he is in standard conditions.



In windy conditions, Lowery had a higher field goal percentage than both Andersen and Stenerud.

Field Goals in Adverse Conditions (Both Cold and Wind)

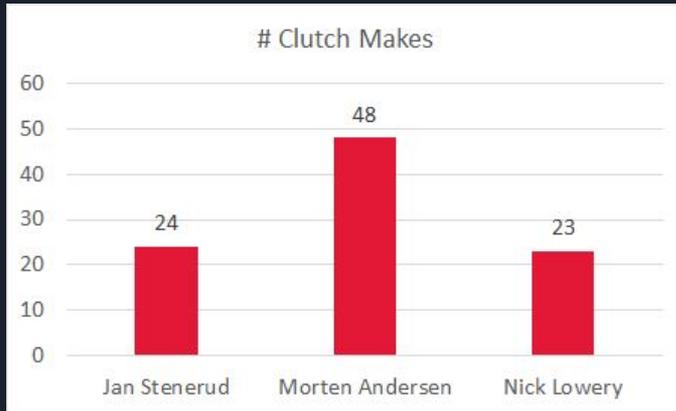
- Lowery also excels when the conditions are both cold and windy, kicking more proficiently in these adverse conditions than Stenerud and Andersen.
- Lowery attempted 111 kicks in these conditions, quite a large sample size.



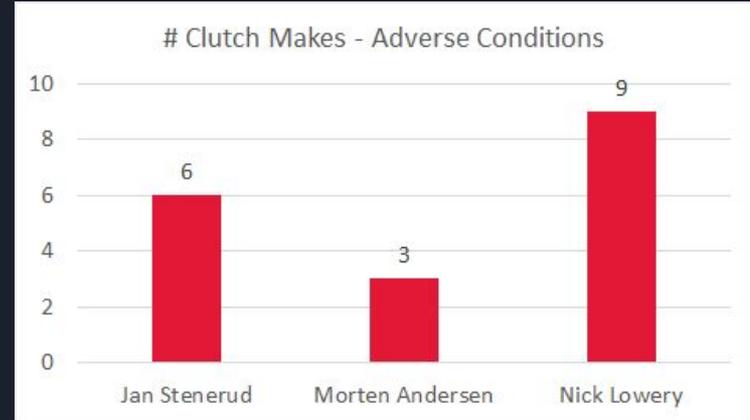
In adverse conditions Lowery shined, helping his team win more than Andersen and Stenerud.

Clutch Field Goals

We define “clutch” field goals as kicks in the fourth quarter which put Lowery’s team in the lead or tied with the other team. Clutch kicks also include kicks made in overtime.



The graph above examines the total amount of field goals made by the three placekickers that meet the “clutch” definition

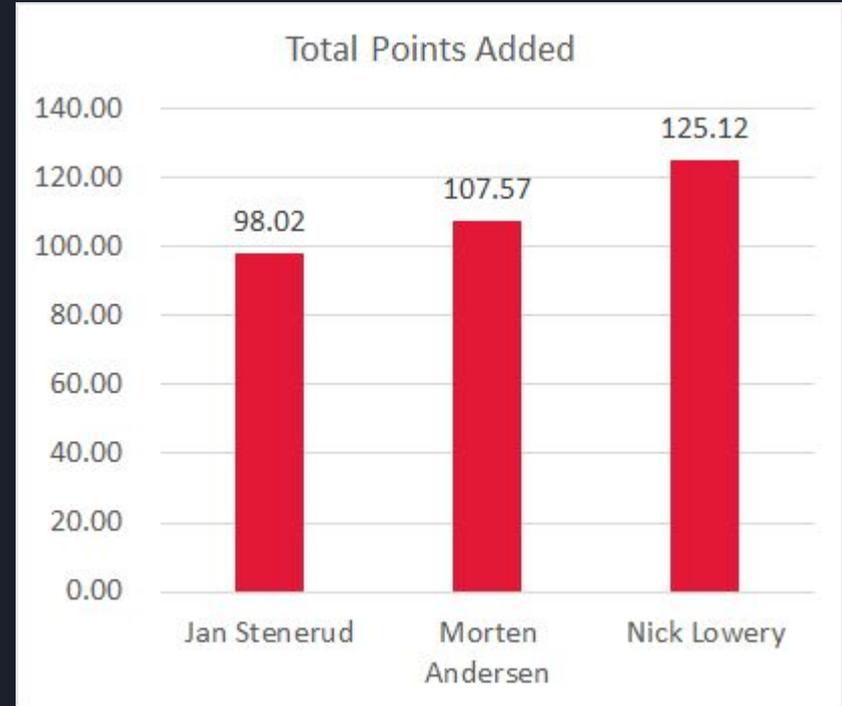


This graph examines the number of clutch kicks made in adverse weather conditions (above 10 mph wind and below 50 degrees Fahrenheit).

Despite spending less time in the league than both Stenerud and Andersen, Lowery is comparable to the two HOF placekickers in total clutch kicks. And in clutch situations in bad weather, Lowery shined even brighter.

Points Added - Career

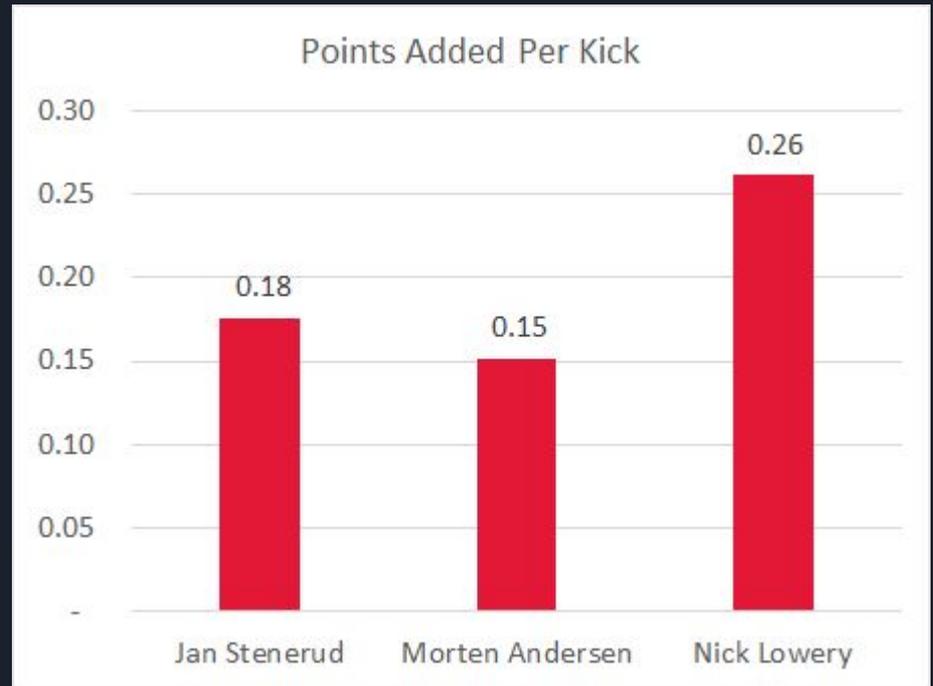
- Points added is a statistic that compares each kick against the league average for that specific distance interval (see appendix for more detail).
- This statistic shows how many more points each players' team scored by his doing versus what you would expect from a replacement level NFL placekicker in that season.



Lowery added more points to his team over his career, despite playing less seasons than Andersen and Stenerud.

Points Added - Per Kick

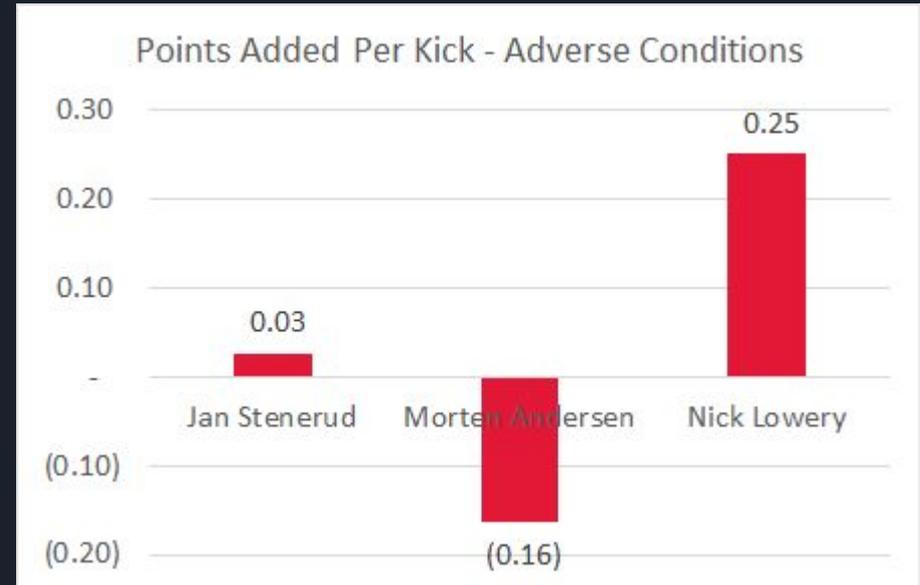
- Points added per kick is an even more influential stat, as it takes into account career length.
- For each kick taken in his career Per each kick, Lowery added 0.26 points over what you would expect from a typical NFL placekicker.
- This is 49% more than Stenerud and 72% more than Andersen



Lowery provided a massive advantage to his team when compared to the league average, adding an unheard of and unmatched 0.26 points per kick.

Points Added - Adverse Conditions

- Not all kicks are created equal!
- In adverse conditions (under 50 degrees Fahrenheit & over 10 MPH wind), Lowery added an average of 0.25 points per kick (just 0.01 points lower than his career average).
- Stenerud adds an average 0.03 points per kick, while Andersen actually loses 0.16 points per kick.



In adverse conditions, generally later in the season during the playoff push, Lowery dominated, outperforming Stenerud and Andersen.



CONCLUSION

- By traditional placekicker metrics, Nick Lowery is one of the best placekickers of all time.
 - Exceptional Career Total FG%
- Under more advanced statistical analysis, Lowery's career becomes even greater!
 - Elite Points Added Per Kick (0.26)
- He is one of the best, if not THE best, placekicker of all time in cold and windy conditions.
 - Games in cold and wind are typically later in the season when playoff implications on the line
 - Lowery's kicking statistics actually improve in adverse conditions
 - Nine clutch kicks made in adverse conditions

Compared to the pure placekickers currently in the Hall of Fame, Nick Lowery's career statistics prove he is as good, if not BETTER, than both current honorees.

Nick Lowery is a Hall of Fame placekicker and he is long overdue for this recognition.



Appendix - Points Added Explanation

Points added is a metric that approximates how much better a placekicker is as compared to a replacement level NFL placekicker. It calculates how many additional points a placekicker gives to his team if he makes a field goal, and how many points he subtracts from his team if he misses as compared to league averages of each kick.

Consider a hypothetical field goal attempt where the league average from the distance is 0%. If the placekicker makes it, he has provided 3 points to his team that are not expected, so the points added would be 3. Consider another hypothetical field goal where the league average from the distance is 100%. If the placekicker misses this kick, his points added would be -3, because he cost his team an automatic 3 points.

For a more typical example, consider a kick where the league average is 72%. If the placekicker makes the kick, his points added would be: $3*(1-0.72) = 0.84$. If the placekicker were to miss that same kick, his points added would be: $3*(0-0.72) = -2.16$.

See the paper by Clark, Johnson, and Simpson on the citations page for even more detail.



References

- Data collected from: <https://www.pro-football-reference.com/>
- Clark, Johnson, and Stimpson. “Going for Three: Predicting the Likelihood of Field Goal Success with Logistic Regression”. MIT Sloan Sports Analytics Conference. March 2013
- Stuart, Chase. “Why Nick Lowery Was the Best Kicker in NFL History”. Footballperspective.com, September 2017



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Pro Football Hall of Fame