

This is an annual summary of all the ditches within Lincoln County. The intent of this report is to fulfill the Statute 103 E requirements, give a brief description of each ditch and provide a condition analysis to assist with future decisions.

Included in this report are 39 ditches in which Lincoln County has all or partial responsibility. Among these ditch systems are three that are joint ditches with Lyon County and one with Pipestone. Not included in this report, are two systems that were turned over to the Yellow Medicine Watershed District through improvement proceedings and two systems that were turned over to the Lac Qui Parle Watershed District.

Included in this report are six ditches that are labeled Public Ditches. The only difference between Public Ditches and the others is that the Lincoln County Highway Department petitioned for their establishment in the 1950's. The County Board is responsible for the maintenance of these systems, the same as the others.

Some of the ditches are titled Judicial Ditches and some are titled Joint County Ditches. A Judicial Ditch is simply a system in which a District Court decided if the system should be ordered in during the establishment period. Joint Ditches are systems that are shared with other Counties and require Joint Board composition and jurisdiction.

We have approximately 134 miles of county tile and 105 miles of open ditch that are under Lincoln County's jurisdiction which includes 12.9 miles of open ditch and 19.3 miles of tile that we share with Lyon County.

All of the systems that have had benefits redetermined since 1979 have the right of way acquired, as specified in MN Statute 103E.021. The systems that have the one-rod permanent easement are CD 7, 8, 14, 18, 35 37 and JD 12, 16, 30 and 31. This is a total of 374,556 feet of open ditch that has a one-road right of way on each side of the ditch (70.9) miles.

RESPECTFULLY SUBMITTED BY:
ROBERT E. OLSEN
LINCOLN COUNTY DITCH INSPECTOR

**LINCOLN COUNTY
MINNESOTA**

JANUARY 2011

**COUNTY DRAINAGE SYSTEMS
REPORT
(Ditch Inspector's Report)**

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COUNTY DITCHES

COUNTY DITCH NO. 2

- LOCATION:** Sections 14, 15, 16, 17, 20 and 21 of Hope Township 2 miles south of Tyler flowing easterly into County Ditch No. 7 & Joint Ditch No. 12 (Redwood River Watershed)
- COMPOSITE:** This system consists of 14,000 feet of open ditch.
- PETITION:** The petition for the establishment of County Ditch No. 2 was submitted on July 26, 1904. It was the first ditch system to be constructed in the County.
- ENGINEERING:** M.B. Hayes of Mankato was appointed on August 25, 1904. The estimated cost for construction was \$1,852.20. The original cost of construction was \$1,680.27.
- BENEFITS:** Viewers were appointed on September 15, 1904, and turned in their report on September 26, 1904. The benefits are \$3,215.75 and are the original benefits.
- FINAL COMMENTS:** This is a shallow ditch system that provides much needed surface drainage. This system had the trees removed, the bottom cleaned and spoils leveled in 1995. Nothing major was spent, on this system, since then, other than minor costs for minor spraying of trees and brush.

The systems don't own the one-rod easement strip on each side of the channel, because the benefits were not redetermined in recent years. The benefits need to be redetermined to meet current day standards. There are properties using the system and not paying for the use of it. Additional property needs to be acquired so the side slope can be flattened out and the one-rod right of way secured.

Ditch viewing and spraying done in 2010.

Year 2011 construction fund is \$2,002.56.

\$3,000.00 assessment approved by the County Board payable 2011.

COUNTY DITCH NO. 7

LOCATION: Sections 6,7,8,15, 16 & 17 of Hope Township –1/2 mile south of Tyler – flows easterly into Tyler Creek then into JD 12 then into the Redwood River. (Redwood River Watershed)

COMPOSITE: This system consists of approximately 33,000 feet of open ditch (6.2 miles) and 4,224 feet of 6-inch to 10-inch tile (0.8 mile).

PETITION: The petition for it's establishment was submitted on January 11, 1906, and repair was done in 1917.

HISTORY: The first repair was done in 1917 and 6 repairs were done between 1949 and 1957.

This system provides an outlet for County Ditch No. 40 and County Ditch No. 33. The watershed for CD 33 is 3.8 square miles and CD 40 has watershed for 2.1 square miles. The watershed for CD 7 is 10.9 square miles.

In the most recent 1979 major repair, trees were removed, side slopes were resloped and the entire system was cleaned to the original bottom. Since that point in time, we have been placing surface water inlet pipe along the edge of the channel, to allow surface water to enter the channel and control the erosion. We have most areas completed.

BENEFITS: The original benefits were \$14,620. The benefits today are \$470,270. When the benefits were redetermined, in 1979, a permanent easement on each side of the ditch was also purchased. The easement is one rod out from the upper cut of the channel on each side. We are in the process of enforcing the one-rod easement.

COST: The cost for the original construction was \$11,406.22.

Ditch work and viewing done in 2010.

Year 2011 construction fund is \$ 703.38.

\$3,000.00 assessment approved by the County Board payable 2011.

COUNTY DITCH NO 8.

- LOCATION:** Sections 3 & 4 of Shaokatan Township – 5 miles west of Ivanhoe
(Yellow Medicine River Watershed)
- COMPOSITE:** This system consists of 10,500 feet (2 miles) of open ditch that is to be maintained by the County system. The DNR is responsible for any required maintenance above a dam near the outer reaches of the system in Section 4.
- PETITION:** The petition for the establishment was submitted February 16, 1906. On October 18, 1916, a petition for repair was submitted and in 1979 for repair.
- HISTORY:** A petitioned for widening & deepening was submitted in 1916 and 1919. Nothing was done either time. In 1979, the system was petitioned for a major repair again. On April 17, 1981, County Ditch No. 8 entered into an agreement with the Department of Natural Resources. The intent of the agreement was to re-flood the outer reaches for wildlife management. A permanent dam was created at station 105+50 of the main open ditch and the outer reaches of this system were reflooded permanently.
- Chamberlain Engineering was the project engineer early in the 1980's. In 1982 repair of the system was completed. All of the main ditch, below the dam, was cleaned and re-sloped to a 2:1. In later years erosion control was placed as needed.
- BENEFITS:** The benefits are \$216,617 currently. When the benefits were redetermined in 1979, an additional one-rod on each side of the channels upper cut, was purchased as a permanent easement.
- FINAL COMMENTS:** This system has been completely reconstructed since the early 1980's. We have been spraying for trees and brush as needed and placing surface water inlets pipes, as needed, since that point in time. This system travels through an area of extremely sandy and gravelly soils. As a result the side slopes are unstable and have slid down, causing irregular ditch upper cuts. The original ditch was constructed deep enough to provide surface drainage, in most cases. Currently the ditch still provides surface drainage therefore it may not be feasible to do any cleaning at this point in time.

Beaver removal and viewing done in 2010.

Year 2011 construction fund is \$2,985.49.

No assessment needed.

COUNTY DITCH NO. 10

- LOCATION:** Sections 23, 24, 25, 26, 27 and 36 of Ash Lake Township – 1.25 miles west of Arco and flowing north into County Ditch No. 35. (Yellow Medicine River Watershed)
- COMPOSITE:** This system consists of 6,402 feet of tile that vary in size from 10 inches to 12 inches and 15,215 feet of open ditch.
- PETITIONS:** May 7, 1906 the original petition for the establishment was submitted. Petitions for repair were submitted on September 21, 1950 & September 1, 1970, for repair. On May 4, 1964, a petition for a lateral was submitted and was dismissed on November 9, 1964.
- ENGINEERING:** March 14, 1906, Arthur Morgan was appointed as engineer for the establishment of the system. His report was turned in on October 17, 1906, estimating cost of construction at \$6,735.61. In 1916, Elmer Keeler was appointed for a repair study and in 1921, George Thorn was appointed for another repair study. On September 21, 1950, Claude Zehetner was appointed for a repair study and recommended repair was ordered in on October 10, 1950, with an estimated cost of \$2,216.20. On July 13, 1970, Leonard Muchlinski was appointed for a repair study and partial repair was ordered in on October 15, 1970.
- VIEWING:** The benefits, as determined in 1906, were \$11,745. The benefits, as determined in 1970, were \$12,715. The benefits of \$12,715 are currently being used.
- COST:** The cost for the original construction was \$7,193.84. In 1950, approximately \$2,216 was spent on repair and in 1970, \$4,088.37 was spent on repair.
- FINAL COMMENTS:** This system has had many various repairs over the years but has had little or no maintenance. The tile branches are shallow, in many areas, therefore they are more susceptible to crushing. The tile on approximately 1,200 feet of the outer reaches of tile branch no. 1, have been dug out & replaced by open ditch by someone over the years. This system does provide for surface drainage but wasn't constructed deep enough, at many locations, to provide for good subsurface drainage.

Currently trees are growing in and near the ditch, especially on the old unlevelled spoils. Many of these trees are too big to control with chemical and should be cut & disposed. Also in some of the areas the spoils need leveling. This system needs to be completely reconstructed by petition.

No work done in 2010.

Year 2011 construction fund is \$3,372.75.

No assessment needed.

COUNTY DITCH NO. 14

LOCATION: Sections 33 & 34 in Marshfield Township & Sections 2, 3, 11, 13 & 14 of Hope Township – east edge of Tyler flowing southeasterly into JD 12 about 2 miles southeast of Tyler. (Redwood River Watershed)

COMPOSITE: This system consists of 800 feet of 18-inch tile and 27,813 feet of open ditch (5.3 miles). This system provides an outlet for County Ditch No. 2,7, 33, 40 and Public Ditch No. 5. This system then empties into Joint Ditch No. 12 southeast of Tyler. The total watershed is 43 square miles for Joint Ditch 12.

PETITIONS: The petition for the establishment was submitted on November 30, 1906. March 2, 1954, a petition for repair, was submitted. A petition for complete reconstruction was submitted in the early 1980's.

HISTORY: The original ditch was constructed in 1907 and the first repair was done in 1954.

Chamberlain Engineering of Montevideo was appointed project engineer for the 1980's project. This project entailed re-sloping, tree removal and disposal, cleaning the channel bottom and seeding the side slopes and one rod out from the upper cut. Since the major 1980's repair we have been adding erosion control as needed. We now have control of most of the erosion. More erosion control structures may need to be placed after some land is removed from CRP.

BENEFITS: The benefits were \$20,970 originally and in 1954, additional benefits were added to bring the total to \$25,741. The benefits were redetermined in the early 1980's and determined to be \$353,780. The amount that is current being used is \$353,780. The redetermination of benefits in the 80's purchased a one rod wide easement on each side of the channels upper cut.

FINAL COMMENTS: Reconstruction of this system was completed about in 1987. As part of the project no erosion control was included therefore we placed surface water inlet pipes as needed after project completion. We have also been spraying to control the regrowth of trees and brush. This system is in excellent condition. It will serve its original intended purpose with minor repairs occasionally.

Spraying and beaver removal done in 2010.

Year 2011 construction fund is \$8,257.93.

No assessment needed.

COUNTY DITCH NO. 15

LOCATION: Sections 28, 29, 30, 31 and 32 of Marshfield Township – 1 mile west and 1 mile north of Tyler – flowing east northeast into a tributary of the Redwood River. (Riverwood River Watershed)

COMPOSITE: This system originally consisted of 14,000 feet of open ditch and 4,500 feet of overflow ditch with tile under it. Over the years the overflow ditch eroded down to top of the tile. In 1966 the tile was disregarded and replaced by open ditch. This system consists of 18,000 feet of open ditch today. County Ditch No. 42 outlets into the outer reaches of this system. County Ditch No. 42 consists entirely of tile.

PETITIONS: The petition for the system establishment was filed November 30, 1906. On June 24, 1965, a petition for repair was filed and on September 6, 1966.

ENGINEERING: Authur Morgan was appointed November 30, 1906, for the system establishment and Leonard Muchlinski was appointed for the the 1965 repair.

BENEFITS: The original benefits were \$7,030. In 1966, the benefits were re-adjusted to \$7,440 by adding additional lands.

COST: The original construction cost was \$5,553.70 and the 1965 repair cost was \$5,892.08. In 1985, all of the trees were removed from the channel, at a cost of \$2,100.

FINAL COMMENTS: This system needs to be cleaned again. The tile outlet of County Ditch No. 42 is submerged under water. Trees and brush have been controlled by spraying. The old spoils haven't been leveled in some locations.

This system needs to have the benefits redetermined, the system cleaned and erosion control structures placed where needed. It would be best if the benefits on County Ditch No. 42 were redetermined at the same time.

No work done in 2010.

Year 2011 construction fund is \$2,229.52.

No assessment needed.

COUNTY DITCH NO. 18

LOCATION: Sections 6 & 7 of Marshfield Township & Sections 1, 12 and 13 of Diamond Lake Township – 2 miles southwest of Arco. This system flows northeasterly into a natural water-course that flows into Lake Stay. (Yellow Medicine Watershed)

COMPOSITE: This system consists of 14, 436 feet of open ditch and 4,000 feet of 10-inch and 12-inch tile.

PETITIONS: The petition for the establishment was submitted on June 12, 1907. In 1981 a petition was submitted for a major repair.

HISTORY: From the establishment of the system until 1981, not many repairs were conducted and very little preventative maintenance was done.

In 1982 trees were removed, the channel was re-sloped with 2 to 1 side slopes, the bottom cleaned and erosion control applied to the entire ditch. Sioux Engineering from Tyler, MN was appointed project engineer. The total costs for everything involved for this major repair was \$121,670.

In 1989 approximately 4,500 feet of open ditch was cleaned.

BENEFITS: The benefits, that are used today, were determined in 1981. The total benefits were determined to be \$263,200. Ray Fink, Milton Stegner & Eldon Felton served as viewers.

FINANCES: This system will be paying off bonding until the year 2006. There will be a projected about \$10,500 shortfall on the call date.

FINAL COMMENTS: This system has been maintained extremely well. The landowners have all maintained a grass strip on each side of the open ditch and have kept said area clear of debris & rock. We have been spraying as needed to control the growth of trees and brush.

Parts of this system need to have a bottom of the open ditch cleaned in the not too distant future.

No work done in 2010.

Year 2011 construction fund is \$6,704.15.

No assessment needed.

COUNTY DITCH NO. 20

LOCATION: Sections 17, 20, 21 and 22 of Diamond Lake Township – 4.5 miles north of Lake Benton – southeast of “Honey Corner”.
(Redwood River Watershed).

COMPOSITE: This system consists of 4,567 of open ditch and 12,654 feet of file varying in size from 8-inch to 12-inch.

PETITIONS: August 23, 1907, the petition for the establishment was submitted. On July 19, 1910, a petition for repair was submitted and again on June 9, 1953.

ENGINEERING: On August 23, 1907, Elmer Keeler was appointed as project engineer. On February 6, 1908, the system was ordered in with an estimated cost of \$3,632. Actual cost to construct was \$3,220.68.

On July 20, 1910, Elmer Keeler was again appointed for a repair by petition. September 2, 1910, the repair was ordered for the system is constructed at an estimated cost of \$4,400.

Petitions for repairs were also submitted in 1950 and 1953.

BENEFITS: Viewers determined the benefits at \$3,962.50 as per report dated February 6, 1908.

COSTS: The open ditch had trees removed and the bottom cleaned and spoils leveled. Tile branches 2 & 3 have been completely replaced as well as other spot repairs on the remainder of the lines.

FINAL COMMENTS: This system is a shallow system and has had a great deal of problems and repairs in the past. The problems resulted from a lack of maintenance and improper use.

No work done in 2010.

Year 2011 construction fund is \$2,806.25.

No assessment needed.

COUNTY DITCH NO. 24

- LOCATION:** Sections 25 and 36 of Marshfield Township flowing east to the county line and emptying in Lyon County at the county line – 2 miles east and ½ mile north of Tyler.
(Redwood River Watershed)
- COMPOSITE:** This system consists entirely of tile. The total amount of tile is 10,400 feet of 4-inch and 12-inch.
- PETITION:** A petition to establish this system, was submitted by the Marshfield Township supervisors on December 1, 1910.
- ENGINEERING:** Elmer Keeler was appointed project engineer on January 5, 1911, and shortly thereafter he submitted his report with an estimated construction costs of \$1, 607.15. The actual costs to construct were \$1,747.50.
- BENEFITS:** Viewers were appointed on January 5, 1911. They're final report reflected the benefits at \$2,330.
- FINAL COMMENTS:** The only indication of any repair of this system was in 1957. At that time some of the main tile were replaced and some tile was cleaned. Several feet of the tile were plugged at that time and were left. It was the engineers opinion, at that time, that it wasn't feasible to repair them. The majority of the problems on this system evolve from the tile being too shallow and an improper outlet.
- My opinion remains the same now as it has for years. This system is out of repairs as it is today and it not feasible to completely repair. Only 5 landowners are assessed into the system. We haven't been contacted to do any repairs on the system in recent years. In essence, this system has been abandoned for years.

Ditch viewing done in 2010.

Year 2011 construction fund is \$902.88.

No assessment needed.

COUNTY DITCH NO. 33

- LOCATION:** Sections 10 & 15 of Hope Township ½ mile south of Tyler – flowing south into CD 7. (Redwood River Watershed)
- COMPOSITE:** This system is a Lateral to County Ditch No. 7. This system has 1,200 feet of open ditch and 2,400 feet of 18-inch tile.
- PETITION:** The petition for the establishment of this system, as a Lateral Ditch to County Ditch No. 7, was submitted on August 18, 1915.
- ENGINEERING:** On October 14, 1915, Walter Larson as appointed as project engineer for the system establishment. Larson's report indicated an estimated construction cost of \$2,573.65.
- BENEFITS:** Viewers were appointed on October 25, 1915. The benefits were determined to be \$3,700. The benefits were ordered redetermined by the County Board of Commissioners in 1992. The viewer's report was accepted on March 23, 1993. The total benefits are \$18,934.64.
- FINAL COMMENTS:** This system drains Danebod Lake on the southeast corner of Tyler and Swan Lake on the west edge of Tyler. A private tile connects to the end of CD 33 and crosses CSAH 7 to drain Swan Lake.
- This system is in fair condition and appears to be operating to its peak potential. Some repairs will be necessary in the future. The system tile lines are shallow in some areas and grossly under-sized.

Repair, ditch viewing and beaver removal done in 2010.

Year 2011 construction fund is \$ 229.11

\$2,000.00 assessment approved by the County Board payable 2011.

COUNTY DITCH NO. 35

- LOCATION:** The outer reaches are in Section 7 of Diamond Lake Township, about 1 mile north and 2 miles west of “Honey Corner” and the outlet end in Section 4 of Lake Stay Township emptying in the south fork of the Yellow Medicine River.
- COMPOSITE:** This system consists of 78,144 feet of various sizes of tile and 64,318 feet of open ditch. (14.8 miles tile & 12.2 miles open ditch). The total watershed area is 33.5 square miles (21,440 acres).
- PETITION:** The petition for the system establishment was submitted on August 1, 1916, and the ditch was ordered in on June 15, 1917. On June 16, 1921, a petition was submitted for the widening, deepening and extending of the upper main.
- HISTORY:** 1984 repair consisted of tree removal, cleaning the channel, resloping the side slopes, leveling the side slopes and seeding. Chamberlain Engineering from Montevideo was the project engineer. His estimate was \$545,677.91. From 1987 to present we have been spending \$20,000 per year to place erosion control, where needed and clean the channel.
- This system provides an outlet for County Ditch No. 10 and Yellow Medicine Ditch No. 17 (previous CD 34).
- BENEFITS:** The original benefits were determined to be \$80,642.41. The current benefits, as determined in the 1980's, are \$1,597,755.00. The one-rod strip on each side of the channel was acquired.
- FINAL COMMENTS:** Most of this system has been restored in good condition. Most of the erosion control has been done. There are no trees and brush growing on this system at this time. The upper main and a part of the lower main were cleaned in the spring of 1998. The system tile lines are grossly inadequate, when comparing to current design criteria.
- In conclusion, the open ditch on this system is in good condition but needs periodic maintenance. Some of the tile lines have been replaced in recent years however most of them are original installed lines. Some of them may need replacing from time to time. This is a good reason to keep a good balance in this fund. Damage occurred during the flooding during the spring of 1997 and has been repaired using financial assistance from FEMA and NRCS. We are currently in the process of enforcing the one-rod grass strip on each side of the ditch. There were several repairs to this system. More needs to be done in 2000.

Repair, beaver removal & ditch viewing done in 2010

Year 2011 construction fund is \$19,675.19.

A loan of \$60,000 was made to JD 19 from 35's Repair Fund (5 years – 2nd year)

No assessment needed.

COUNTY DITCH NO. 36

- LOCATION:** Sections 15, 16, 17 and 21 of Limestone Township – 3 miles north and 5 miles east of Ivanhoe flowing northeast into a tributary of the Yellow Medicine Watershed.
- COMPOSITE:** This system consists of 600 feet of open ditch and 17,300 feet of tile ranging in size from 5-inch to 20-inch.
- PETITION:** The petition for the establishment was submitted on July 29, 1916. On May 19, 1987, a petition for a redetermination of benefits was submitted.
- ENGINEERING:** Walter Larson was appointed as the original project establishment engineer then in May of 1918, Elmer Keeler took over. The estimated construction cost was \$6,737 for the new system. The cost of the original system was \$8,558 including payment of damages.
- Several spot repairs have been done over the years. The repairs consisted of repairing inlets, broken tile and cleaning of the outlet ditch. In 1985, \$4,380.27 was spent on repairs.
- BENEFITS:** Viewers were appointed on September 6, 1916, and their final amended report was submitted on November 21, 1917. The 1917 benefits were \$8,558.
- The benefits were again redetermined in 1987. Those benefits are currently used and are \$72,030.00.
- FINAL COMMENTS:** In 1985 the system tile were repaired and open ditch cleaned. This system is now in good functioning condition. Periodic maintenance will be required to preserve the system.

Tile work and viewing done in 2010.

Year 2011 construction fund is \$ 168.58.

\$5,000.00 assessment approved by the County Board payable 2011.

COUNTY DITCH NO. 37

- LOCATION:** North, south and west of Ivanhoe in Royal, Ash Lake, Shaokatan and Hendricks Townships – flows northeasterly into the Yellow Medicine River.
- COMPOSITE:** This system consists of 77,191 feet of tile and 77,641 feet of open ditch (14.6 miles of tile and 14.7 miles of open ditch).
- PETITION:** The petition for the establishment of the system was submitted on August 5, 1916, and construction was completed in 1921. A petition for a redetermination of benefits and complete repair was submitted in 1979.
- HISTORY:** During the original construction several changes were made. Several minor repairs were done over the years and very little preventative maintenance. In 1979 Sioux Engineering was appointed project engineer. The estimated construction cost was \$759,159. Several appeals were filed and about 10 years passed before construction actually began. An agreement was reached with DNR, and other environmental interests, to restore the Anderson Lake area west of Ivanhoe. The ditch was left untouched in Anderson Lake and a water control structure was placed at the outlet to keep a permanent water level in the basin.
- In 1989 the major repair was completed. The project included removal of trees, re-sloping, cleaning, leveling or spoils, erosion control structures, an reseeding of inslopes as well as the one-rod on each side of the ditch.
- BENEFITS:**
- Repair and spraying done in 2010.**
- Year 2011 construction fund is \$4,814.59.**
- \$20,000.00 assessment approved by Board and payable 2011.**

COUNTY DITCH NO. 38

- LOCATION:** Sections 7, 8, 9, 17 & 18 of Limestone Township – 4 miles north and 4 miles east of Ivanhoe – flowing northeast into the Yellow Medicine River.
- COMPOSITE:** This system consists of 14,300 feet of tile varying in size from 6-inch up to 18-inch.
- PETITION:** October 16, 1916, a petition for the establishment of this system was submitted.
- ENGINEERING:** Elmer Keeler was appointed project engineer on October 16, 1916, and his report was turned in on April 19, 1917. His estimated cost to construct was \$5,983. The total actual cost of constructing was \$7,313.76.
- Through the years, several minor repairs were done. In 1951 a segment of tile was rerouted 330 feet around a grove of trees and 600 feet of outlet channel was cleaned. Several other small repairs, such as intake repair and broken tile repairs, were done.
- BENEFITS:** Viewers were appointed on October 16, 1916, and their report was submitted on October 10, 1917. They arrived at a benefit value of \$7,045. This value is currently in use.
- FINAL COMMENTS:** Much of this tile system was installed shallow, therefore, a higher repair rate will be required.
- This system is in fair condition at this time and needs no immediate work. The system is grossly inadequate in size and does not meet current day design criteria.

Ditch viewing, repair and cleaning done in 2010.

Year 2011 construction fund is \$ 86.47.

\$5,000.00 assessment approved by Board and payable 2011.

COUNTY DITCH NO. 39

LOCATION: Sections 27, 34 and 35 of Hendricks Township – 5 miles west and 1 mile north of Ivanhoe.

COMPOSITE: This system consists of 12,600 feet of tile that vary in size from 6-inch to 12-inch.

PETITION: A petition for the establishment of this system was submitted on March 15, 1917.

ENGINEERING: On April 18, 1917, Elmer Keeler was appointed as project engineer and he submitted his report on July 17, 1917. The estimated project cost was \$2,986.30. The project was ordered in on September 11, 1917, and the actual cost of construction was \$3,841.

A major repair was petitioned for and conducted in 1948. The repair involved the rerouting of a 12-inch tile line around a grove of trees, for a distance of 540 feet. Several other miscellaneous repairs were also done at that same time. The cost for that repair was \$1,852.31. In 1998, \$1,169.55 was spent on repairing tile and in 1992 the outlet channel was cleaned.

BENEFITS: The benefits determined in 1917 were \$3,841 and that figure is presently used as the basis for assessments.

FINAL COMMENTS: This system is shallow and is hydraulically too small to meet current needs.

In conclusion this system is in fair condition and can be kept operable for many years. In many areas, the tile lines are too shallow to meet current needs and farming methods. In the event the landowners desire better drainage, it is recommended they petition for an improvement.

No work done in 2010.

Year 2011 construction fund is \$2,495.45.

No assessment needed.

COUNTY DITCH NO. 40

LOCATION: Sections 1,2, 10, 11 and 12 of Lake Benton Township – 3 to 4 miles west of Tyler – flowing northeast and empties into County Ditch No. 7 (Redwood River Watershed)

COMPOSITE: This system consists of 2,534 of open ditch and 41,547 feet of tile that vary in size from 6-inches to 24-inches.

PETITION: This system was petitioned for establishment on January 29, 1917.

ENGINEERING: George Thorn was appointed as project engineer on September 3, 1918. This report showed an estimated cost of \$28,240.22 to construct the proposed ditch. The actual cost to construct the system was \$30,208.55.

BENEFITS: Viewers were appointed on April 4, 1919, and determined the benefit value to be \$33,025. This same value is currently the basis for any special assessments on this system.

FINAL COMMENTS: Several minor repairs have been necessary over the years. Most of the repair consisted of tile repairs and restoration of the open ditch at the outlet end. In 1992 the entire tile branch “L” was replaced at a cost of \$2,657.94. Extra-strength, smooth wall, polyethylene pipe was used to replace the existing concrete tile.

I am expecting that approximately 2,000 to 2,500 feet of 12-inch tile may need to be replaced on the outer reaches of the main tile. The tile between stations 20+00 and 40+00 has been in very poor condition every time repairs were made in this general area in the past 14 years. The tile line was disintegrated in this area. The estimated cost to replace this tile, using current prices would be somewhere between \$20,000 and \$25,000.

In conclusion, this system is generally in good condition, however it does not meet current needs hydraulically. More repairs will be required in the future. This system is well worth maintaining at this point in time.

Tile work done in 2010.

Year 2011 construction fund is \$8,788.95.

No assessment needed.

COUNTY DITCH NO. 41

- LOCATION:** Sections 27 and 28 of Limestone Township – 5 miles east and 1 mile north of Ivanhoe – flowing south thence emptying into a tributary of the Yellow Medicine River.
- COMPOSITE:**
- PETITION:** The petition for the system establishment was submitted on July 14, 1917.
- ENGINEERING:** On September 10, 1917, Elmer Keeler was appointed the project engineer. His report reflected an estimated construction cost of \$6,481. The actual cost to construct the system was \$6,846.55.
- BENEFITS:** Viewers were appointed on February 18, 1918, and their report was approved on April 3, 1918. The benefit value was determined to be \$8,800. This value is still used today as the basis for special assessments.
- FINAL COMMENTS:** This system has not been a high maintenance system. The outlet ditch was cleaned in 1992 and a few minor repairs were completed prior to that time. In the spring of 1995 a blowout on the lower part of the main 24-inch tile developed. During the repair, 40-feet of dual wall polyethylene, was installed. It was difficult to find good enough tiles to hook onto at each end. Resulting from the repair, we researched this system to see how many feet of the tile need to be replaced. We found that the disintegrated tile is limited to about 400-500 feet through the deepest part of the lower main. In talking with the landowners, they felt we should wait till the tile fails before we replace it.

The tile lines on this system are shallow at several locations. Due to the depth, it will be necessary to repair more frequently.

With the exception of the lower main tile, most of this system appears to be in fair condition, and will function for many years to come with minor maintenance. It will cost several thousands of dollars to replace the 400-500 feet of 24-inch tile when it needs to be replaced.

No work done in 2010.

Year 2011 construction fund is \$2,409.57.

No assessment needed.

COUNTY DITCH NO. 42

- LOCATION:** Section 1 of Lake Benton Township, Section 36 of Diamond Lake Township, Section 6 of Hope and Sections 29, 30, 31 and 32 of Marshfield Township. This is the most easterly end of Lake Benton Lake and flows easterly and empties into the outer reaches of County Ditch No. 15. (Redwood River Watershed)
- COMPOSITE:** This system consists of 36,142 feet of tile that varies in size from 6-inches to 28-inches.
- PETITION:** The petition for the system establishment was submitted on August 15, 1917.
- ENGINEERING:** On September 10, 1917, Elmer Keeler was appointed as project . engineer. His report indicated as estimated construction cost of \$21,743. On March 13, 1918, the system was ordered established. The contracted value for the installation of the system was \$18,534.
- BENEFITS:** The viewers were appointed on February 19, 1918. They determined the benefit value to be \$30,472.50. This number is still used today as the basis for special assessments on this system.
- FINAL COMMENTS:** This ditch outlets into the outer reaches of County Ditch 15. The tile outlet of County Ditch No. 42 is currently at least ½ submerged in water. Due to this condition, County Ditch No. 15 needs to be cleaned. The benefits must be redetermined on both systems prior to the initiation of any major repairs as there are properties receiving benefits that are not paying for the system use.
- In conclusion, some of the tile lines are shallow; however, this system appears to be in fair condition. County Ditch 15 needs cleaning to preserve the efficiency of CD 42.

No work done in 2010.

Year 2011 construction fund is \$4,170.48.

No assessment needed.

COUNTY DITCH NO. 45

- LOCATION:** Sections 19, 20, 29 and 28 of Marble Township – 8 miles north & 2 miles west of Ivanhoe.
- COMPOSITE:** This system consists of 18,485 feet of 6-inch to 20-inch tile.
- PETITION:** The petition for the system establishment was submitted in 1918.
- ENGINEERING:** George Thorn was appointed project engineer. The actual cost to construct the system was \$14,549.66.
- BENEFITS:** Viewers determined the benefits to be \$16,995.92. This benefit value is still being used as the basis for the system special assessments.
- FINAL COMMENTS:** Several minor repairs have been necessary in the past. The tile lines, in general, are shallow but appear to be in fair condition. The outlet ditch was cleaned to restore the systems efficiency. This system is also shallow and grossly inadequate therefore does not meet current design criteria.

Repair work done in 2010.

Year 2011 Construction fund is \$5,467.40.

No assessment needed.

COUNTY DITCH NO. 49

- LOCATION:** Sections 3 & 4 of Marble Township – flowing north and outlets on the north County line into Yellow Medicine County ¼ mile west of U.S. Highway 75. (Yellow Medicine River Watershed)
- COMPOSITE:** This system consists of 17,295 feet of 6-inch to 18-inch tile and 500 feet of open ditch.
- PETITION:** The petition for the system establishment was filed on March 18, 1920.
- ENGINEERING:** George Thorn was appointed as a project engineer on March 18, 1920, and submitted his report on April 14, 1921. His estimated cost to construct was \$6,575. The actual construction cost was \$8,155.75.
- BENEFITS:** Viewers turned in their final report on June 18, 1921. The benefits were determined to be \$9,085. This benefit value is currently being used as the basis for special assessments to the system.
- FINAL COMMENTS:** Some minor repairs have been necessary over the years. Most of the repairs were done on miscellaneous tile problem areas. In the spring of 1997, we will be cleaning about 500 feet of open ditch into Yellow Medicine County. The outlet ditch and the culvert under the township road were cleaned to restore the systems efficiency. The outlet ditch was cleaned for about 500 feet on property owned by William Floto on the Yellow Medicine County side.
- In conclusion, this system is in fair condition and should continued to function well into the future with a low level of maintenance
- A culvert replacement was done at the county line the culvert was a use one we replaced on county ditch 14.

No work done in 2010.

Year 2011 construction fund is \$2,005.29.

\$1,000.00 assessment approved by the County Board payable 2011.

COUNTY DITCH NO. 50

- LOCATION:** Sections 19, 20, 29 and 30 of Lake Stay Township – 1 mile north of Arco – flowing east emptying into Lake Stay. (Redwood River Watershed)
- COMPOSITE:** This system consists entirely of tile lines that range in size from 6-inch on up to 15-inches. The total length is 6,200 feet.
- PETITION:** The petition for the establishment of this system was submitted on July 15, 1920.
- ENGINEERING:** George Thorn was appointed on July 15, 1920, and his report was accepted on October 18, 1920. His report reflected an estimated construction cost of \$5,220.50. Bids were awarded for the project construction on November 18, 1920. The actual construction costs were \$5,176.70.
- BENEFITS:** Viewers were appointed on July 15, 1920, and their amended report was approved on October 18, 1920. The benefit value was determined to be \$7,266.50. This value is currently used for the basis of special assessments to the system.
- REPAIRS:** This system has not been a high maintenance system. Over the years a few minor repairs were necessary, such as cleaning the outlet ditch and miscellaneous tile repairs. It is believed that part of the outer main 10-inch concrete may have a significant amount of silt build up. It may be necessary to clean or replace some of this tile. Before replacement the benefits must be redetermined because there are properties using the system and not paying for its use.
- FINAL COMMENTS:** This tile system is shallow in many areas thus causing higher maintenance. This system is grossly undersized, therefore, does not meet current design criteria. The system does appear to function to its original intent.

No work done in 2010.

Year 2011 construction fund is \$2,089.36.

No assessment needed.

PUBLIC DITCHES

PUBLIC DITCH NO. 1

- LOCATION:** Section 32 of Hansonville and Sections 5&6 of Hendricks Townships – two miles north of Hendricks. (Lac Qui Parle Watershed)
- COMPOSITE:** This system consists of 8,052 feet of open ditch.
- PETITION:** Lincoln County Highway Engineer, Claude Zehetner submitted a Petition for the establishment on May 2, 1949. On July 14, 1958, the Minnesota Dept of Transportation petitioned to allow minor changes to construct Trunk Highway No. 271.
- ENGINEERING:** Claude Zehetner was appointed on May 2, 1949. Claude's report was filed on July 11, 1949 & the final hearing was held on August 9, 1949. The ditch was ordered in on the same day.
- BENEFITS:** The benefits were determined to be \$3,730 in 1949. The benefits today are \$5,410.
- COST:** The original cost of the ditch was \$3,736.54. In 1966, a repair petition was submitted by the Lincoln County Highway Department. The cost of the repair was \$1,749.54.
- FINAL COMMENTS:** This system had trees removed and the ditch bottom completely cleaned in the fall of 1997. The remainder of the work was completed in the summer of 1998. This system is in good condition and it now provides the intended drainage. The landowners along this system have agreed to voluntarily maintain a one-rod grass strip along the ditch.
- Benefits need redetermining on this system as several properties are using the system and are not paying into it.

Spraying done in 2010.

Year 2011 construction fund is \$4,395.19.

No Assessment needed.

PUBLIC DITCH NO. 2

LOCATION: Sections 16, 17 20 & 21 of Hansonville Township – six miles north of Hendricks. (Lac Qui Parle Watershed)

COMPOSITE: This system consists of 3,800 feet of 8-inch to 14-inch tile.

PETITION: March 4, 1952, Lincoln County Highway Engineer, Claude Zehetner petitioned for the establishment.

ENGINEERING: March 4, 1952, board appointed Claude Zehetner as Project Engineer.

On April 1, 1952, the report was submitted. Estimated costs for the proposed project were \$2,107.46.

On May 6, 1952, the final hearing was held. The ditch was ordered to be constructed, as per plan, after the appeal period was up.

September 2, 1952, Contracts for the construction were awarded for \$1,352.22 plus \$990.00 for labor.

BENEFITS: Benefits were approved at \$2,562.10 during the establishment. These benefits are currently the basis for assessments.

FINAL COMMENTS: This system has required very little maintenance over the years. In 1983 work was done to the outlet costing \$712.00. In 1993, \$490.52 was spent to repair surface water inlets.

2000 Repair of an intake was done. This system required no work or repair in 2001.

This system is in excellent condition as it exists today and should Require very little maintenance in the future. Annual inspections Should be conducted to preserve the efficiency of this system.

This system has had no need for any maintenance or activity on it since 1993.

No work done in 2010.

Year 2011 construction fund is \$1,124.13.

No assessment needed.

PUBLIC DITCH NO. 3

LOCATION: Sections 32 & 33 of Marble Township - 5 miles north & 1 mile west & ½ mile north of Ivanhoe along CR 105. (Yellow Medicine River Watershed)

COMPOSITE: This system consists of 2,410 feet of 8-inch to 12-inch tile and 90 feet of open ditch.

PETITION: A petition for the establishment was filed by the Lincoln County Highway Engineer, Claude Zehetner on May 5, 1953.

ENGINEERING: Claude Zehetner was appointed project engineer on May 5, 1953. His report was filed on June 9, 1953. The system was ordered in with estimated cost of \$1,446.14.

BENEFITS: The benefits were determined and accepted as \$1,448.80

FINAL COMMENTS: This system has required little maintenance in the past and has been functioning to its intended purpose. The outlet was restored the fall of 1998 and a surface water inlet needs repair in the County Road 105 ditch currently. This inlet was repaired in 2000.

This system is in excellent condition & should perform many years with minor maintenance. The system needs to be inspected annually to preserve its efficiency.

No work done in 2010.

Year 2011 construction fund is 709.66.

\$1,000.00 assessment approved by the County Board payable 2011.

PUBLIC DITCH NO. 4

- LOCATION:** Section 24 of Shaokatan Township and Section 19 of Ash Lake Township – 3 miles south and 3 miles west of Ivanhoe (Yellow Medicine River Watershed)
- COMPOSITE:** This system consists entirely of 3,830 feet of 6-inch to 12-inch tile and outlets into Lake Shaokatan.
- PETITION:** The Lincoln County Highway Engineer, Claude Zehetner Petitioned for the establishment to drain Co. Road No. 5 on June 9, 1954.
- ENGINEER:** Claude Zehetner was appointed project engineer on June 9, 1954. His report was turned in shortly thereafter estimating the costs to be \$3216.30
- BENEFITS:** The original benefits were determined to be \$3,917.75 and are currently the basis for assessments.
- COSTS:** The costs to construct this system were \$3,895.00.
- FINAL COMMENTS:** I have seen no record of repairs needed on this system. The system appears to be functioning well and appears to be in good condition. The system needs to be inspected annually to preserve its efficiency. A blind intake was installed at the top end of this system. The reason for this was the outlet of this system was discharging a heavy load of sediment from the surrounding ag land. The cost was \$1232.00.

The last 300' of tile before the outlet has been re-routed around Mark Buss's cabin. Landscaping and final cleanup will be completed the spring of 2010. Finalized in 2010.

No work done in 2010.

Year 2011 construction fund is \$1,767.55.

No assessment needed.

PUBLIC DITCH NO. 6

LOCATION: Sections 5 & 8 of Limestone Township – ten miles north of Arco on County State Aid Highway No. 7 (Yellow Medicine River Watershed)

COMPOSITE: This system consists of 120 feet of open ditch and 1,495 feet of 8-inch to 12-inch tile.

PETITION: The Lincoln County Highway Engineer, Claude Zehetner, filed a petition for the establishment on September 7, 1954.

ENGINEERING: On September 7, 1954, Claude Zehetner was appointed the project engineer. In October 1954, Claude filed said report and the system was ordered in on November 9, 1954. The estimation construction cost was \$1,427.45.

BENEFITS: The benefits were determined to be \$1,459.40 during the establishment period. These benefits are still the basis for special assessments.

COST: The costs to construct this system were \$1,456.80.

FINAL COMMENTS: Records indicate that little or no maintenance had been done in the past. This system needs to have the outlet restored as the tile is currently out-letting under the silt level. No one appears to be interested in cleaning the outlet.

The Lincoln County Highway Department pays approximately 51 percent of any cost incurred to this system. Neither the Highway Department nor the other effected landowners have any interest in doing anything with this system. It appears the system has been abandoned due to lack of maintenance.

No work done in 2010.

Year 2011 construction fund is \$1,584.25.

No assessment needed.

**JOINT
AND
JUDICIAL
DITCHES**

JUDICIAL DITCH NO. 11

- LOCATION:** Sections 5,6 & 7 of Marble Township and 450 feet of tile ditch out-letting in Yellow Medicine County - 2 miles west of U.S. Highway 75 on the north County line. (Yellow Medicine River Watershed)
- COMPOSITE:** This system consists of 21,061 feet of 4 inch to 16 inch tile. The lower 450 feet outlets into Yellow Medicine County.
- ESTABLISHMENT:** The system was ordered in by the Twelfth District Court on September 3, 1918. The system was completed in June of 1920, and the total cost of construction & related costs was \$7,864.76.
- ENGINEERING:** On August 31, 1917, E.W. Youngdale was appointed by the Twelfth District Court. On June 10, 1918, Youngdale's report was turned in with an estimated project cost of \$6,785.
- In 1971 a petition for the improvement of the outlet for this system was filed and Chamberlain Engineering from Montevideo was appointed. The project was then dismissed at a later date.
- VIEWING:** Viewers were appointed on June 11, 1918, and their final hearing was held on August 31, 1918.
- BENEFITS:** The benefits were accepted at \$8,420.30. All of the benefits were in Lincoln County.
- FINAL COMMENTS:** This system has not had a great deal of repairs over the years. Approximately 2,500 feet of the 16-inch tile main is shallow and has a considerable amount of breakage. Said area also has rock and trees growing over the tile.
- The original benefits of \$8,420.30 are the current basis for special assessments.
- One of the major benefactors, on this system, has been maintaining much of the tile. If any actions is to be considered, it is my recommendation that strong considerations be given to an improvement of the outlet.

No work done in 2010.

Year 2011 construction fund is \$1,599.48.

No assessment needed.

JOINT DITCH NO. 12

- LOCATION:** Section 13 of Hope Township in Lincoln County & Sections 17 and 18 of Shelburn Township in Lyon County, east of Tyler along U.S. Highway 14 2.5 miles –f lows northeasterly into the Tyler Creek then into the Redwood River.
- COMPOSITE:** This system consists of 15,940 feet of open ditch. It provides an outlet for County Ditch No. 2, 7, 14, 33 and 40 as well as Public Ditch No. 5 and Joint Ditch No. 13. The total watershed is approximately 49 square miles.
- PETITION:** The petition for the original establishment of Joint Ditch 12 was filed on November 17, 1906, and was established on July 8, 1907. Also in 1982 the system was petitioned for a complete repair and redetermination of benefits.
- BRIEF HISTORY:** The original cost of construction for the system was \$8,648.81. Miscellaneous repairs were conducted over the years. In 1984, a complete major repair was done. Trees and brush were removed, the ditch bottom was cleaned, spoils leveled and grass seeded both on the channel inslopes and one rod out from each side.
- BENEFITS:** The original benefits are established in 1907, were \$13,055. The benefits as redetermined in 1982 are \$101,830. Included with the redetermination was the acquisition of a one-rod easements on each side of the ditch that is to be kept into permanent grass.
- FINAL COMMENTS:** This system has had erosion control incorporated, since the reconstruction, as many of the areas needed it. The trees and brush have been controlled well. The system is in working condition. It may be necessary to place more surface inlets at locations where erosion is a problem. Many of the side slopes are gravelly and have sloughed. Corrective measures will need to be taken to prevent additional problems.

Ditch viewing work and spraying done in 2010.

Year 2011 construction fund is \$5,500.58.

No assessment needed.

JOINT DITCH NO. 13

- LOCATION:** Sections 24 and 25 of Hope Township in Lincoln County and Sections 18, 19 and 30 of Shelburn Township in Lyon County – 2 miles south and 2 miles east of Tyler – flows northerly and empties into Joint Ditch No. 12. (Redwood River Watershed)
- COMPOSITE:** This system consists of 15,200 feet of open ditch.
- PETITION:** The petition for the establishment was submitted on July 26, 1906.
- ENGINEERING:** Author Morgan was appointed on March 24, 1906, as project engineer. His report estimated the cost for construction to be \$3,435. The actual cost to construct said system was \$3,476.83.
- BENEFITS:** Viewers were appointed on May 27, 1907. The benefits were determined to be \$4,085. In 1907 benefits are currently used as a basis for special assessments. Lyon County has 66.8% of the benefits and Lincoln County has 33.2% of the benefits.
- FINAL COMMENTS:** In the summer of 1994 the trees and brush were sprayed. Some of the larger trees will not die. The spoils are left unlevelled in some areas and portions of the upper reaches need cleaning. The lower levels of the ditch are pastured. The pasturing does not appear to be adversely effecting the system. These lower reaches of the system were cleaned in 1984 when Joint Ditch No. 12 was reconstructed. Much of the system does have an appreciable amount of silt build up on the channel bottom. This system is also a shallow system and does not meet current design criteria.

This system needs to have benefits redetermined, trees removed, re-sloping, cleaning, spoils leveled, erosion control placed and reseeded. This system must have a redetermination of benefits prior to any repair.

Spraying done in 2010.

Year 2011 construction fund is \$7,447.87.

No assessment needed.

JOINT- COUNTY DITCH NO. 16 (LINCOLN & PIPESTONE)

- LOCATION:** Sections 26, 27, 28, 29, 33, 34, 35 and 36 of Hope Township – 4.5 miles south of Tyler flowing easterly and emptying at the Pipestone County line.
(Redwood River Watershed)
- COMPOSITE:** This system consists of 28,430 feet of open ditch & 2,300 feet of 12-inch tile.
- PETITION:** The petition for the establishment was submitted on November 2, 1906. On Oct. 7, 1957, a petition was submitted to straighten a short segment of the ditch. March 13, 1995, a petition for a redetermination of benefits and major repair of the system was submitted with 69% signatures.
- ENGINEERING:** On March 1, 1907, Arthur Morgan was appointed for the establishment engineer. His report projected an estimated cost of \$7,096. Sioux Engineering from Ruthton, was appointed as project engineer of 1995. Their report was approved and ordered constructed on July 2, 1996. The estimated construction cost was \$177,213.13 including all engineering and administrative costs. The project included removal of trees, channel re-sloped to a 2:1, surface inlet pipes placed, spoils leveled and grass seeded both in channel and 16.5 feet on each side. The bid was awarded to Cooreman Contracting from Tracy, MN for the amount of \$87,728.95 and was completed in 1997.
- BENEFITS:** Viewers were appointed on January 11, 1907, to determine the original benefits. The original benefits were determined to be \$8,024. Viewers were appointed in 1995 for redetermination. Their final report was accepted on June 18, 1996. The benefits as per June 18, 1996, are \$314,491.16. Some of the benefits were Pipestone County therefore it was necessary for this system to become a Joint system with Pipestone County. One board member from Pipestone County and four board members from Lincoln County are to serve on this board. Ted Schwing, Frank Josephson and Lloyd Nielson served as viewers on this project. The one-rod permanent easement on each side of the channel was purchased pursuant to MN Statute 103E.021.
- COST:** The cost of the original construction was \$8,533.49. The cost to complete the current repair appears to be \$155,000, including purchasing the additional land for resloping and the one-rod on each side of the channel to be kept in permanent grass. The bonds were set up for a fifteen year call date.
- Many repairs were done throughout the years. In 1956, trees were cleared, tile relayed, new culverts placed and the channel cleaned for \$7,905.85. In 1971, the lower channel was cleaned along with some of the outlet channel in Pipestone County. In 1977, \$2,539.54 was spent for cleaning the outlet along with spot repairs.
- FINAL COMMENTS:** With minor amounts of maintenance, this system should provide its original intended drainage.

Petition presented for Lateral to Main ditch by Axel Hansen and Joann Kruse.

Ditch cleaning done in 2010.

Year 2011 construction fund is \$23,484.73.

No assessment needed.

JUDICIAL DITCH NO. 19

- LOCATION:** Sections 19, 20, 29, 30 and 32 of Marble Township & NE1/4 Section 6 of Royal Township – 7 miles north & 1 mile west of Ivanhoe – flows northeast into a natural watercourse. (Lac Qui Parle Watershed)
- COMPOSITE:** This system consists of 33,494 feet of open ditch & 1,172 feet of 12-inch tile.
- PETITION:** The petition for the establishment of this system was submitted in 1907.
- ENGINEERING:** Arthur Morgan was appointed as project engineer in 1907.
- BENEFITS:** The benefits were determined to be \$11,025.50 as per report dated March of 1908.
- REPAIRS:** 1913 – Partial cleaning costs \$362.95.
1954 – 12 inch tile replaced and open ditch was cleaned
1981 – partial clean out of main
Several other repairs have been done over the years that are to numerous to mention.
2006 – Cleaning costs \$1,200.00
- FINAL COMMENTS:** Because of the topography in this area and the steep side slopes of the ditch, this entire system needs repair. This system flows through light and sandy soils that do not allow steep sides slopes to stay in place. Resulting from the unstable soils, the steep side slopes slough down to the channel bottom thus raising the flow line of the ditch bottom causing additional erosion. Also trees and brush have been allowed to grow on the unlevelled spoils and cattle have been allowed in the ditch, over the years.
The original benefits are still being used as the basis for special assessments. There are indicators of properties draining into this system that are not assessed into the system.
This system is in dire need of a major repair or improvement. It is mandatory a petition be used to redetermine benefits and /or for a repair or an improvement.

Tile work done/crop settlement in 2010.

Year 2011 construction fund is \$10,428.77

Received loan from County Ditch 35 Repair Fund for \$60,000 (5 years – 2nd payment)

\$14,000 assessment approved by County Board payable in 2011.

JUDICIAL DITCH NO. 21

LOCATION: Sections 12 & 13 of Hansonville Township – 7 miles north of Hendricks and 4 miles east (Lac Qui Parle Watershed)

COMPOSITE: This system consists of 4,400 feet of open ditch and 1,700 feet of 12-inch to 18-inch tile.

PETITION: Some time before May of 1908. On September 11, 1908, the Ninth District Court Judge ordered the establishment.

ENGINEERING: Elmer Keeler was appointed project engineer and his report was submitted on June 3, 1908, with an estimated cost of \$1,016.67 for the construction. The actual cost of construction was \$1,450.63.

BENEFITS: The viewers determined the benefits to be \$2,446.25.

FINAL COMMENTS: Currently the benefits that were established in 1908, are the basis for special assessments.

The open ditch has been cleaned, a private crossing was placed, and some of the system tile was dug up and replaced with open ditch, by a landowner. This action was not authorized by the County Board of Commissioners.

There are only 5 landowners assessed on this system, one of them pay about 64% of any cost incurred. Should these landowners desire to do any additional work on this system, it would be in their best interest to petition for a redetermination of benefits and an improvement. The existing system should be petitioned to abandon. The system has not had any authorized repair done to this system for many years.

No work done in 2010.

Year 2011 construction fund is \$427.64.

No assessment needed.

JUDICIAL DITCH NO. 22

- LOCATION:** Sections 11, 14, 15, 16, 22 and 23 of Shaokatan Township, just on the north side of Lake Shaokatan, flowing northeast into a branch of the Yellow Medicine River. (Yellow Medicine Watershed)
- COMPOSITE:** This system consists of 14,700 feet of open ditch and 22,586 feet of 4-inch and 12-inch tile.
- PETITION:** The petition for the original establishment was submitted on May 8, 1909.
- ENGINEERING:** Elmer Keeler as appointed to engineer the original establishment on July 5, 1909. His estimate to construct was \$6,248.33 and the actual cost was \$5,174.69. On April 6, 1954, Claude Zehetner was appointed to engineer repair proceedings.
- BENEFITS:** Viewers were appointed by District Court on July 5, 1909. The accepted benefit value was \$9,214.00
- FINAL COMMENTS:** This system has been completely restored by doing a portion each year since 1987. This is a shallow system. Trees were removed on the open ditch, the ditch was cleaned and the spoils were leveled. Also surface water inlet pipes were installed at various locations to control the erosion. Since the reconstruction of the system, trees and brush has been controlled.

This system is grossly under sized and is too shallow to meet current day design criteria. Also the side slopes are too steep for the soils that surround the system. As a result the maintenance will be higher.

This system is now in fair condition and provides drainage to its intended purpose. We will need to do some continued low maintenance to keep it in its present condition. It is our intent to continue to spray to control the regrowth of trees and brush along with annual inspections. We will need to reclean some ditch bottom in the not too distant future.

Petition to impound and divert water was granted on the Larry Scholten property - 2004.

Benefits need to be determined on this system to meet current standards.

Ditch cleaning done in 2010.

Year 2011 construction fund is \$ 418.62.

\$6,000.00 assessment approved by County Board payable 2011.

JUDICIAL DITCH NO. 28

- LOCATION:** Sections 3, 4, 9 & 10 of Hansonville Township – 8 miles north & 1 mile east of Hendricks flowing southeast into a branch of the Lac Qui Parle river. (Lac Qui Parle River Watershed)
- COMPOSITE:** This system consists of 9,303 feet of tile varying in size from 10-inches to 15-inches.
- PETITION:** The petition for establishment was submitted in 1913. A District Judge ordered the ditch in on March 14, 1914.
- ENGINEERING:** Walter Larson was appointed as project engineer on May 27, 1913. His estimated project cost was \$3,374.58.
- BENEFITS:** The viewers were appointed on July 28, 1913. They arrived at the benefit value of \$3,780.
- FINAL COMMENTS:** This system has had high repair expense. The outlet is submerged in water most of the year and most of the area on the tile lines were installed shallow. In the winter of 97-98, the 15-inch clay tile was replaced between stations 43+50 and 48+00. The tile line is about 14 feet deep in and quick sand in this area. We have had many problems in this area over the years. We replaced the tile with 15-inch dual wall polyethylene non-perforated pipe.

This tile is grossly undersized for today's needs. Between February 9 and 13 of 1998, I met with the landowners and informed them of the system's conditions and needs. I recommended that we maintain the system as it is but that they privately place waterways on the surface to remove the excess surface water. The system is sized grossly inadequate to carry both surface and subsurface water but is large enough to handle subsurface drainage only.

We spend about \$8,550 on repairing tile and cleaning the 300 feet of outlet ditch in 1997-98.

In conclusion this system is in fair condition but will require a high level of maintenance and repair. This system is also grossly inadequate in size, therefore, needs to be petitioned for an improvement.

2009 a petition for improvement was accepted by the Lac Qui Parle Yellow Bank Watershed District and is currently under their review.

Tile repair and cleaning done in 2010.

Year 2011 construction fund is \$1,536.60.

\$5,000.00 assessment approved by County Board payable 2011.

JUDICIAL DITCH NO. 29

LOCATION: Sections 8, 9, 10, 15, 16, 17, 21, 22, 23, 26, 27, 28, 29, 33, 34 and 35 of Lake Stay Township and Sections 3 and 4 of Marshfield Township - 1.25 miles east of Arco – flowing northerly into the south branch of the Yellow Medicine River. (Yellow Medicine River Watershed)

COMPOSITE: This system consists of 46,180 feet of open ditch and 12,700 feet of tile varying in size from 6-inches to 12-inches.

PETITIONS: The petition for the original establishment was submitted in April of 1915 and in 1980 another petition was submitted for major repair.

BENEFITS: The benefits, as determined in 1982, are \$414,59.50. The appointed viewers on this project were Ted Schwing, Donald Fir and Lloyd Nielson. They did allow for the permanent one-rod easement on each side of the channel, however, the landowners were not credited or paid for the amount, due to the fact the project, as planned, was not constructed.

FINAL COMMENTS: The consensus of an informational meeting held on March 6, 1955, was to spread \$20,000 payable 1996, and keep close track of maintenance expenses and spread nothing additional from that point on.

Ditch viewing and beaver removal done in 2010.

Year 2011 construction fund is \$12,060.34.

No assessment needed in 2011.

JUDICIAL DITCH NO. 30

- LOCATION:** Occupies several sections in Diamond Lake & Marshfield Townships. The outer reaches are ½ mile north of “Honey Corner” and flows easterly and outlets into Coon Creek about 4 miles north of Tyler. (Redwood River Watershed)
- COMPOSITE:** This system consists of approximately 65,478 feet of open ditch and 128,218 feet of various sizes of tile. (12.4 miles of open ditch and 24.28 miles of tile)
- PETITIONS:** The petition for the establishment of this system was submitted to the Ninth Judicial District Court on June 4, 1915. In 1955, a petition for repair was submitted to the County Board. An improvement was recommended and no action was taken. In 1980 a petition for repair was once again submitted and shortly thereafter was turned into a petition for an improvement.
- ENGINEERING:** Sioux Engineering from Tyler was appointed for the repair -improvement project in the 1980’s. The engineers report estimated the construction cost to be \$700,869.00. The project was ordered in as an improvement shortly thereafter.
- BENEFITS:** The benefits, as determined in the early 1980’s, are \$1,560,734.00. The viewers that were appointed to the 1980’s project were Ted Schwing, Donald Fir and Lloyd Nielson. The one-rod right of way on each side of the channel was acquired as a permanent easement.
- FINAL ACCOUNTS:** This system has been completely improved in the 1980’s. As part of the project the ditch was made deeper, re-sloped, trees removed, spoils leveled and erosion control installed. The final construction was completed in about 1987. This is the most serviceable ditch in the County. This is the only system that meets today’s design criteria. This system also has a permanent easement that is one rod (16.5 feet) on each side of the ditch.

It is expected that there will be about a \$57,000 shortfall on the bond call date. We currently have about \$17,740 in the fund to cover maintenance and bonding shortfall. Damage occurred during the flood in the spring of 1997 and has been repaired with the use of FEMA and NRCS financial assistance.

In conclusion this system is in excellent condition. We are controlling the regrowth of trees and brush and erosion as needed. There are several miles of this system that need cleaning at this time.

Cleaning, repair and road crossing done in 2010.

Year 2011 construction fund is \$ 902.93.

\$20,000.00 assessment approved by County Board payable 2011.

JOINT DITCH NO. 31

LOCATION: Sections 1,2 and 12 of Hope Township, Sections 25, 26, 35 and 36 of Marshfield Township in Lincoln County and Sections 31 & 32 of Coon Creek Township, Sections 4, 5, 6, 7, 8, 9 and 10 of Shelburn Township in Lyon County. This system is 1 to 4 miles east of Tyler and flows easterly into the Redwood River.

COMPOSITE: This system consists of approximately 37,000 feet of open ditch and 102,000 feet of tile that vary in size from 5-inches to 22-inches.

PETITION: The petition for the establishment was submitted on July 29, 1915. A petition for a redetermination of benefits was submitted in 1992 and a petition for major reconstruction of the system in 1993.

ENGINEERING: O.H. Sterk was appointed on September 28, 1915, for the system establishment. His report was filed on April 2, 1917, that reflected an estimated construction cost of \$46,825.41. The actual cost for the construction of the system ended up being \$61,989.

In 1993, Sioux Engineering of Ruthton, MN, was appointed the project engineer for the major repair. The report reflected an estimated cost of \$261,116.64. Bids were left for the construction for \$294,867.42 in the fall of 1994.

BENEFITS: The original benefits were determined to be \$80,610. The current net benefits are \$314,304.69 as determined in 1993. Lyon County has 59.62% and Lincoln County has 40.37% of the total benefits. The one-rod easement on each side of the channel was purchased for a permanent grass strip.

FINAL COMMENTS: R & G Construction from Marshall had the tree removal contract and Cooreman Contracting from Tracy, had the dirt work contract. These contracts included tree & debris removal, re-sloping, cleaning of the ditch bottom, leveling of the spoils, erosion control and reseeding of the slopes and one rod on each side of the open ditch. The final hearings were held in 1996 and all contracts were completed and accepted.

Cleaning of the upper ditch in David Norgaard's property was completed in 2006.

Applying for FEMA Flood mitigation on Norgaard Property

Ditch viewing and repair work done in 2010.

Year 2011 construction fund is \$ 482.52.

\$5,000.00 assessment approved by County Board payable 2011.

JUDICIAL DITCH NO. 32

- LOCATION:** Sections 26, 27, 34 and 35 of Marshfield Township – 1 mile north of Tyler – flowing northerly into the outer reaches of Coon Creek. (Redwood River Watershed)
- COMPOSITE:** This system consists of a total of 18,440 feet of 6-inch to 18-inch tile.
- PETITION:** The petition for the establishment was submitted on July 24, 1915. This system was ordered in by District Court.
- On March 18, 1980, two individuals petitioned to be able to outlet into the system.
- ENGINEERING:** Engineer Walter Larson was appointed by the District Court on September 27, 1915. His report indicated an estimated construction cost of \$5,234. The total construction costs were \$6,215.53.
- BENEFITS:** The viewers were appointed in District Court on July 26, 1916. Their report summarized a total benefit of \$7,673.50. Those same benefits are being used as the basis for today's special assessments.
- FINAL COMMENTS:** This system has not needed a great deal of major repairs over the years. The majority of the repairs, that were necessary, consisted of minor breakage of tile and simply replacing 1 or 2 tiles. In 1987 the outlet ditch was cleaned and the outlet of the tile was restored totaling a cost of \$4,000. Much of this system is shallow in depth.
- This system is in fair condition but will require frequent minor repairs due to the shallow depth of the tile. Also about 800 feet of the outlet ditch needs cleaning again.

Ditch repair and viewing work done in 2010.

Year 2011 construction fund is \$4,235.28.

No assessment needed.

This is an annual summary of all the ditches within Lincoln County. The intent of this report is to fulfill the Statute 103 E requirements, give a brief description of each ditch and provide a condition analysis to assist with future decisions.

Included in this report are 39 ditches in which Lincoln County has all or partial responsibility. Among these ditch systems are three that are joint ditches with Lyon County and one with Pipestone. Not included in this report, are two systems that were turned over to the Yellow Medicine Watershed District through improvement proceedings and two systems that were recently turned over to the Lac Qui Parle Watershed District.

Included in this report are six ditches that are labeled Public Ditches. The only difference between Public ditches and the others is that the Lincoln County Highway Department petitioned for their establishment in the 1950's. The County Board is responsible for the maintenance of these systems, the same as the others.

Some of the ditches are titled Judicial Ditches and some are titled Joint County Ditches. A Judicial Ditch is simply a system in which a District Court decided if the system should be ordered in during the establishment period. Joint Ditches are systems that are shared with other Counties and require Joint Board composition and jurisdiction.

We have approximately 134 miles of county tile and 105 miles of open ditch that are under Lincoln County's jurisdiction which includes 12.9 miles of open ditch and 19.3 miles of tile that we share with Lyon County.

All of the systems that have had benefits redetermined since 1979 have the right of way acquired, as specified in MN Statute 103E.021. The systems that have the one-rod permanent easement are CD 7, 8, 14, 18, 35, 37 and JD 12, 16, 30 and 31. This is a total of 374,556 feet of open ditch that has a one-rod right of way on each side of the ditch (70.9 miles).

**RESPECTFULLY SUBMITTED BY:
ROBERT E. OLSEN
LINCOLN COUNTY DITCH INSPECTOR**

Lincoln County **Environmental Office**

2009 Lincoln County Drainage Report

February 2, 2010

As the Lincoln County Ditch Inspector it is my privilege to report the public drainage systems are in reasonably fair operating condition. Various repairs have been made on several systems this year. The cleaning of Judicial Ditch no. 19 has been completed with the exception of some trees which need to be burned and buried this year. Our office will begin to contact property owners about purchasing a one rod easement from them on one side to create a buffered area along the ditch. This easement will allow for easier access to the ditch for spraying, Inspections and repairs. In May we replaced approximately 2300 ft. of 12 inch tile of the main branch of Judicial Ditch no. 22. This repair shall restore the drainage back to its original condition. The re-alignment of the outlet of Public Ditch no. 4 was completed with some landscaping to do the spring of 2010. The abandonment of the old crossing for Co. Ditch no.37 on US Hwy no.75 just North of Ivanhoe was completed this year also. These along with many other small repairs were completed in 2009 by private contractors or staff from the Environmental Office.

We had to remove sediment in several ditches and we have identified several more where sediment needs to be removed. In the past it has been difficult to hire contractors to clean smaller stretches of ditches because of limitations of equipment or time. We will continue to group individual projects together to accomplish our responsibility of maintaining the drainage systems at the most reasonable cost.

In 2009 Administrative Orders were issued to property owners along open ditches to restore the required one rod grass buffer. With the exception of one property owner who restored only one side the ditch all orders were complied with. This approach worked well to this point and we will indentify other areas and send orders to land owners this year.

One problem that exists is the overloading by private systems of our public drainage systems. This continues to place further strain on an already over-loaded system. A petition was presented to the Lac Qui Parle / Yellow Bank River Watershed District for the improvement of drainage to Judicial Ditch No. 28 in Hansonville Township. This petition is in the process of public review at this time.

The spraying of our open ditches for noxious weeds and trees is a sound management practice, which I intend to continue to do. It is my intention to spray about 1/3 of the open ditches each year. I again hired Tom Barber to spray. He did a very good job and I will continue to consider him again for next year.

I am also reporting that the ditch repair funds have been balanced and are in good standing. I am recommending that one-year special assessments be placed on County Ditches No. 2, 37 and 45, Public Ditch No. 6 and Judicial Ditches No. 19, 28 and 29.

I would like to express my thanks to the Lincoln County Board of Commissioners for your support and direction.

Respectfully,

Robert E. Olsen
Lincoln County Ditch Inspector

Lincoln County Environmental Office

2009 Lincoln County Drainage Financial Report

Levy Recommendations

February 2, 2010

These are my recommendations for the Levies that need to be spread over certain ditch systems. I feel that they are sensitive to the economic situation of Lincoln County.

1. County Ditch No. 2	\$ 2,000.00
2. County Ditch No. 37	\$ 10,000.00
3. County Ditch No. 45	\$ 2,000.00
4. Public Ditch No. 6	\$ 1,000.00
5. Judicial Ditch No. 19	\$ 14,000.00 (5 year assessment) -*See addendum
6. Judicial Ditch No. 28	\$ 3,000.00
7. Judicial Ditch No. 29	<u>\$ 5,000.00</u>
 TOTAL	 \$ 37,000.00

Fund No. 42-300

Judicial Ditch No. 30

Date		Debit	Credit	Total
				9,372.07
1/1/2010	Settlement amounts from loan		383.74	9,755.81
6/10/2010	Settlement Special Delinquent		1.42	9,757.23
7/28/2010	A&C Exc - JD 30 Clean Co. Ditch	14,673.51		-4,916.28
7/28/2010	Jan-July Reimbursement	660.00		-5,576.28
8/26/2010	Diamond Lake Township-Rd Crossing	2,565.33		-8,141.61
8/26/2010	A&C Exc - JD 30 Twn Road Crossing	1,345.29		-9,486.90
10/10/2010	Close JD30 Bond fund to Repair		19.83	-9,467.07
12/17/2010	July-Dec Reimburseent	630.00		-10,097.07
12/31/2010	One Year Loan from CD 35		11,000.00	902.93
		19,874.13	11,404.99	902.93

Fund 42-0310

Joint Ditch No. 31

Date		Debit	Credit	Total
				3,408.43
4/8/2010	Lyon County Ditch Billing	240.55		3,167.88
7/28/2010	Johnson Trenching Co-Overload&Insp.	225.00		2,942.88
7/28/2010	Jan-July Reimbursement	120.00		2,822.88
10/26/2010	A&C Excavating-Blocked tile			2,822.88
10/10/2010	Norgaard - Ditch Viewer		150.00	2,972.88
10/10/2010	Close JD31 Bond fund to Repair		0.64	2,973.52
10/10/2010	2007-Oct-Nov. Settlement Error	27.00		2,946.52
10/26/2010	A&C Excavating-Blocked tile	1,170.00		1,776.52
12/6/2010	Rinke Noonon - Research & Repair	1,094.00		682.52
12/17/2010	July-Dec Reimburseent	1,200.00		-517.48
12/31/2010	One Year Loan from CD 35		1000.00	482.52
				482.52
				482.52
				482.52
				482.52
				482.52
		4,076.55	1,150.64	482.52

Fund 42-320

Judicial Ditch No. 32

Date		Debit	Credit	Total
				4,509.78
3/4/2010	Gayle Rasmussen - Viewer	50.50		4,459.28
5/6/2010	Johnson Trenching Co-Tile Repair 8"	164.00		4,295.28
7/28/2010	Jan-July Reimbursement	120.00		4,175.28
10/10/2010	Norgaard - Ditch Viewer		150.00	4,325.28
12/17/2010	July-Dec Reimburseent	90.00		4,235.28
		424.50	150.00	4,235.28