ADJOURNED MEETING OF THE COUNTY BOARD OF COMMISSIONERS
September 9, 2014 – BOARD AGENDA

9:00 1) J. Mark Wedel, County Board Chairperson

- **A) Call to Order**
- **B) Pledge of Allegiance**
- **C) Board of Commissioners Meeting Procedure**
- **D) Approval of Agenda**
- **E) Citizens' Public Comment –** Comments from visitors must be informational in nature and not exceed (5) minutes per person. The County Board generally will not engage in a discussion or debate in those five minutes but will take the information and find answers if that is appropriate. As part of the County Board protocol, it is unacceptable for any speaker to slander or engage in character assassination at a public Board meeting.

2) Consent Agenda – All items on the Consent Agenda are considered to be routine and have been made available to the County Board at least two days prior to the meeting; the items will be enacted by one motion. There will be no separate discussion of these items unless a Board member or citizen so requests, in which event the item will be removed from this Agenda and considered under separate motion.

- **A) Correspondence File August 26, 2014 – September 8, 2014**
- **B) Approve 8/26/14 County Board Minutes**
- **C) Approve Commissioner Warrants**
- **D) Approve Auditor Warrants – Taconite Payments to Towns & Cities**
- **E) Adopt Resolution – County Tax Forfeited Land Sale**
- **F) Approve Sale of Forfeited Vehicles – Sheriff's Office**
- **G) Approve 2015 Medical Examiner Contract and Authorize Signatures**
- **H) Accept Donation from Brat Sale Proceeds of $194.51 to Sobriety Court**
- **I) Approve Duplicates of Lost Municipal Order or Warrants – Treasurer's Office**
- **J) Approve Application for Cancellation of Forfeiture**

9:05 3) John Welle, County Engineer

- **A) Adopt Resolution – Award S. P. 001-610-022/025**
- **B) Bridge No. 01504 – CSAH 15 over Cedar Brook**
- **C) Approve Right of Way Plat No. 19**

9:35 4) Bobbie Danielson, HR Director

- **A) Approve Personnel Committee Recommendations**
  1. **Fill one FT Public Health Nurse Position – HHS**
  2. **Promote 3 Existing Certified Appraisers to Senior Certified Appraisers**

9:45 5) Kirk Peysar, County Auditor

- **A) Adopt Resolution – 2015 Unorganized Cemetery**
- **B) Adopt Resolution – 2015 Unorganized Road & Bridge**
- **C) Adopt Resolution – 2015 Unorganized Fire Protection**
- **D) 10:00 Public Hearing – Partial Abandonment of a Drainage System**

11:00 Break

11:15 6) Nathan Burkett, County Administrator
A) Testimony in Support of Enbridge Pipeline

11:45 7) Committee Updates

12:30 Adjourn

CALL TO ORDER

The Aitkin County Board of Commissioners met this 26th day of August, 2014 at 9:02 a.m. with the following members present: Chairperson J. Mark Wedel, Commissioners Laurie Westerlund, Don Niemi, Brian Napstad, Anne Marcotte, County Administrator Nathan Burkett, and Administrative Assistant Sue Bingham.

APPROVED AGENDA

Motion by Commissioner Marcotte, seconded by Commissioner Niemi and carried, all members voting yes to approve the August 26, 2014 amended agenda. Item 8A - Property Tax Discussion, was removed.

HEALTH & HUMAN SERVICES BOARD

AITKIN COUNTY HEALTH & HUMAN SERVICES BOARD MEETING MINUTES
August 26, 2014

I. Attendance

The Aitkin County Board of Commissioners met this 26th day of August, 2014, at 9:03 a.m. as the Aitkin County Health & Human Services Board, with the following members present: Chairperson Commissioner Mark Wedel; Commissioners, Anne Marcotte, Brian Napstad, Don Niemi, and Laurie Westerlund; and others present included: County Administrator Nathan Burkett; H&HS Director Tom Burke; H&HS Staff Members Eileen Foss, Income Maintenance Supervisor; Erin Melz, Public Health Supervisor; Sue Tange, Social Service Supervisor; Kathy Ryan, Fiscal Supervisor; Julie Lueck, Clerk to the Health & Human Services Board; and guests; Mickey Gault and Katie Nelson, H&HS Advisory Committee Members; and Nanci Sauerbrei, Aitkin Independent Age; Roberta Elvecrog, Georgia Johnson, and Bob Harwarth, citizens; John Drahota, Undersheriff.

II. Approval of Health & Human Services Board Agenda

Motion by Commissioner Napstad, seconded by Commissioner Westerlund, and carried; the vote was to approve the Agenda as mailed/posted

III. Review July 22, 2014 Health & Human Service Board Minutes

Motion by Commissioner Westerlund, seconded by Commissioner Niemi, and carried, the vote was to approve the July 22, 2014, Health & Human Services Board Meeting Minutes.

IV. Review Bills

Motion by Commissioner Napstad, seconded by Commissioner Marcotte, and carried; the vote was to approve the Bills as presented this date.

V. General/Miscellaneous Information

A. NACO Appointment – Tom Burke discussed his appointment to the NACO Healthy Counties Initiative Advisory Board and how it compliments his involvement on the NACO Health Steering Committee. Motion by Commissioner Marcotte, seconded by Commissioner Napstad, and carried, the vote was to approve and support the appointment of Tom Burke to the NACO Healthy Counties Initiative Advisory Board and participate in the out of state events as scheduled by NACO.

B. MNChoices Update – Erin Melz distributed and reviewed a MnCHOICES handout with respect to Launching MnChoices within H&HS on September 17th. She also reviewed the handout which discusses what MnCHOICES

is all about noting it is a single, comprehensive assessment and support planning web-based application for long-term services and supports in Minnesota. It includes standards and protocols and serves as a common data collection tool.

VI. Contracts

A. WIC Agreements for the period September 1, 2014, to August 31, 2015 between Aitkin County Health & Human Services and:
1. Hill City Independent School District #2
2. McGregor Independent School District #4

Motion by Commissioner Napstad, seconded by Commissioner Niemi, and carried, the vote was to approve and authorize the Board Chair to sign the WIC Agreements for the period September 1, 2014, to August 31, 2015 between Aitkin County Health & Human Services and:
1. Hill City Independent School District #2
2. McGregor Independent School District #4

B. Purchase of Service Agreement between ACH&HS and Compass Counseling Partners, Nisswa, for the period August 1, 2014 to December 31, 2014. Motion by Commissioner Marcotte, seconded by Commissioner Westerlund, and carried, the vote was to approve and authorize the Board Chair to sign the Purchase of Service Agreement between ACH&HS and Compass Counseling Partners, Nisswa, for the period August 1, 2014 to December 31, 2014.

VII. Administrative Reports:

A. Financial & Transportation Reports – Kathy Ryan reviewed and discussed her reports.

VIII. Committee Reports from Commissioners

A. H&HS Advisory Committee – Commissioners Westerlund and/or Marcotte Meeting updates from Committee Members: Mickey Gault & Katie Nelson Draft minutes of the August 6, 2014 meeting. Ann Marcotte commented on the Waivered Services presentation given at the meeting and the handout she received at the meeting and shared with the other commissioners today. No additional comments pertaining to the Advisory meeting were made.

B. AEOA Committee Updates- Commissioner Niemi – No meeting.

C. NEMOJT Committee Updates – Commissioner Napstad – No meeting since his last report.

D. CJI (Children's Justice Initiative) – Commissioner Westerlund – Sue Tange commented that it had been a short meeting with routine roundtable discussions.

E. Lakes & Pines Update – Commissioner Niemi noted that he has not met with Bob Benes to discuss weatherization questions.

F. CHS - Erin Melz noted that they had a short regular meeting on August 14th and then moved on to a Strategic Planning Meeting where they discussed visions for CHS and values. They are currently gathering information as to how other Community Health Boards are structured and will be addressing how they want to structure the Tri-County CHS Board.

Next Health & Human Services Board Meeting – September 23, 2014

HHS BOARD ADJOURNED

Break: 10:00 a.m. to 10:18 a.m.	**BREAK**
Motion by Commissioner Napstad, seconded by Commissioner Niemi and carried, all members voting yes to approve the Consent Agenda as follows: A) Correspondence File: August 12, 2014 – August 25, 2014; B) Approve County Board Minutes: August 12, 2014; C) Approve Commissioner Warrants: General Fund $53,310.36, Road & Bridge $24,564.52, State $375.00, Trust $5,339.43, Forest Development $17,223.21, Long Lake Conservation Center $7,907.86, Parks $2,371.69 for a total of $111,092.07; D) Approve Auditor Warrants – July Sales & Use Tax: General Fund $408.66, Road & Bridge $1,363.53, Health & Human Services $6.43, State $6,762.00, Trust $17.11, Forest Development $0.09-, Long Lake Conservation Center $149.91, Parks $171.00 for a total of $8,878.55; E) Approve Auditor Warrants – Tax Overpays: Taxes & Penalties $1,797.80; F) Approve Commissioner Warrants: General Fund $133,754.84, Road & Bridge $48,823.36, Special Revenue $12,025.73, Health & Human Services $896.05, Trust $2,810.48, Forest Development $8,882.05, Long Lake Conservation Center $10,746.95, Parks $9,789.90 for a total of $227,729.36; G) Adopt Resolution – White Pine Logging & Threshing Show; H) Adopt Resolution – County VSO Operational Enhancement Grant Program; I) Authorize Sale of Forfeited 1992 Geo Prizm as Salvage – Sheriff's Office; J) Approve Utilization of Unused Employee Flex Spending Account Funds for Health Promotion Team Purposes; K) Approve 2014 Emergency Management Performance Grant (EMPG) agreement and authorize signatures; L) Approve Temporary ON Sale 3.2 Malt Liquor License – Howie's Mud Bog; M) Approve and Sign MCCC Bylaws and Joint Powers Agreement; N) Authorize Sale of Used Timber – Highway Department; O) Accept $75 Donation to the Aitkin County Sheriff's Office – Deloris Goetzke	**REGULAR BOARD RECONVENED** **CONSENT AGENDA**
Under the consent agenda, motion for a resolution by Commissioner Napstad, seconded by Commissioner Niemi and carried, all members voting yes to adopt resolution – White Pine Logging & Threshing Show: **BE IT RESOLVED,** the Aitkin County Board of Commissioners agrees to approve the following Application for Large Assembly: White Pine Logging & Threshing Show – Williams Township. This is scheduled to take place August 30th & 31st, September 1st, 2014 from 7:00 A.M. to 12:00 Midnight.	**RESOLUTION 082614-051 WHITE PINE LOGGING & THRESHING SHOW**
Under the consent agenda, motion for a resolution by Commissioner Napstad, seconded by Commissioner Niemi and carried, all members voting yes to adopt resolution – County VSO Operational Enhancement Grant Program: **BE IT RESOLVED** by **Aitkin County** that the County enter into the **Grant Contract** with the Minnesota Department of Veterans Affairs (MDVA) to conduct the following project: **County Veterans Service Office Operational Enhancement Program**. The grant must be used to provide outreach to the county's veterans; to assist in the reintegration of combat veterans into society; to collaborate with other social service agencies, educational institutions, and other community organizations for the purposes of enhancing services offered to veterans; to reduce homelessness among veterans; and to enhance the operations of the county veterans service office, as specified in Minnesota Laws 2013	**RESOLUTION 082614-052 COUNTY VSO OPERATIONAL ENHANCEMENT GRANT PROGRAM**

Chapter 142 Article 4. This grant should not be used to supplant or replace other funding.

BE IT FURTHER RESOLVED by **Aitkin County** that the County Veterans Service Officer, **Penny Harms** be authorized to execute the Grant Contract for the above-mentioned program on behalf of the County.

TEMPORARY ON SALE 3.2 MALT LIQUOR LICENSE HOWIE'S MUD BOG

Under the consent agenda, motion by Commissioner Napstad, seconded by Commissioner Niemi and carried, all members voting yes to approve temporary ON Sale 3.2 Malt Liquor License for a period from August 29, 2014 through August 31, 2014:

Park Rapids Eagles Club #870, d/b/a Park Rapids Eagles Club #870 – Wagner Township (Howie's Mud Bog)

ENBRIDGE PIPELINE

Nathan Burkett, County Administrator discussed the proposed Enbridge Pipeline with the Board. The Board heard public comments from John Gornick, Big Sandy Lake; Janet Hill, McGregor; Sandra Skinaway, Sandy Lake Ojibwe; Veronica Skinaway, Sandy Lake Band of Mississippi Chippewa Indian; Willis Mattison, Osage; Georgia Johnson, Aitkin; Dale Lueck, Aitkin; Vern Awes, Big Sandy Lake; Curtis Sparks, McGregor; George Tiessen, Libby; and Mark Johnson, Big Sandy Lake. After Board deliberation, motion for a resolution by Commissioner Westerlund, seconded by Commissioner Marcotte and carried, all members voting yes to adopt resolution – In Support of the Sandpiper Pipeline Project and Enbridge's Proposed Route:

RESOLUTION 082614-053 IN SUPPORT OF THE SANDPIPER PIPELINE PROJECT AND ENBRIDGE'S PROPOSED ROUTE

WHEREAS, North Dakota Pipeline Company LLC (Enbridge) has been operating safely and successfully in Minnesota for more than 65 years;

WHEREAS, significant improvements to the nation's energy infrastructure are desperately needed in order to increase national security and energy independence;

WHEREAS, Enbridge places safety and environmental protection at the forefront of all its daily operations and major projects, and constantly improves procedures, technologies and training to reduce the potential for spills as well as improve results from remediation;

WHEREAS, Enbridge is currently investing nearly $2.5 billion in the Sandpiper Pipeline Project in Minnesota, is paying more than $34 million in annual property taxes to the state of Minnesota, and will pay approximately $25 million in additional property tax payments in the first year of Sandpiper's operation;

WHEREAS, Sandpiper will create approximately 1,500 construction jobs in Minnesota; about 50 percent hired from local union halls;

WHEREAS, the Sandpiper Pipeline project will bring additional $2.5 million tax revenue to Aitkin County which will allow for better services without a tax consequence for property owners;

WHEREAS, route and system alternatives fail to cross Aitkin County and any delay in the Sandpiper Project, or any significant reroute, will prevent Aitkin County from benefiting from the significant positive economic impact that will result from this project and will negatively impact Aitkin County.

WHEREAS, Enbridge has worked with all state and local authorities to determine the

proposed route of the Sandpiper Pipeline Project in Aitkin County and across the state of Minnesota, respecting all impacts to people and the environment while fulfilling all applicable regulatory requirements and surpassing other route alternatives; **NOW, THEREFORE, BE IT RESOLVED** that the Aitkin County Board of Commissioners extends its support for Enbridge's proposed route of the Sandpiper Pipeline Project and urges the Public Utilities Commission to adhere to an efficient permitting process for the Sandpiper Pipeline and to approve Enbridge's proposed route; **FISCAL NOTE**: There is no direct cost to the county resulting from the adoption of this resolution.	
Break: 12:12 p.m. to 12:25 p.m.	**BREAK**
Tom Girtz, RtVision introduced himself to the Board and thanked them for Aitkin County's continued use of RtVision solutions.	**RtVISION**
John Welle, County Engineer asked for Board authorization for the Aitkin County Highway Department to continue to work with Lake Country Power to convey ownership of requested excess right of way to Lake Country Power. The Board consensus was to grant authorization to proceed.	**SALE OF EXCESS RIGHT OF WAY**
Motion for a resolution by Commissioner Napstad, seconded by Commissioner Niemi and carried, all members voting yes to adopt resolution – MnDOT Agreement No. 06551: **BE IT HEREBY RESOLVED,** that Aitkin County enter into MnDOT Agreement No. 06551 with the State of Minnesota, Department of Transportation for the following purpose: To provide for the State to enter upon County Right of Way to install Mississippi River Trail signing along the designated Mississippi River Trail route on County roadways and for the County to provide for proper maintenance of the route signing. Such work will be conducted under State Project No. 8823-293, on various Trunk Highway routes. **BE IT FURTHER RESOLVED,** that the Aitkin County Engineer is authorized to execute the Agreement and any amendments to the Agreement.	**RESOLUTION 082614-054 MnDOT AGREEMENT NO. 06551**
Motion by Commissioner Napstad, seconded by Commissioner Niemi and carried, all members voting yes to accept Architectural Service Agreement for the Jacobson Shop from WSN in Baxter at a cost not to exceed $16,500.00.	**ARCHITECTURAL SERVICE AGREEMENT – JACOBSON SHOP**
Lori Grams, Treasurer reviewed the second quarter 2014 Investment Report with the Board.	**2ND QUARTER INVESTMENT REPORT**
Bobbie Danielson, Human Resources Director discussed the PERA Correctional Plan with the Board. Motion by Commissioner Niemi, seconded by Commissioner Marcotte and	**PERA CORRECTIONAL**

carried, all members voting to abstain from taking a position on the retirement system referendum related to the PERA correctional plan.	**PLAN**
The Board reported on the following: Snake River Watershed, Canvassing Board, MHB, Shamrock Township Board, Aitkin County Fair, HRA, CMCC, Sobriety Court, TZD.	**BOARD DISCUSSION**
Motion by Commissioner Westerlund, seconded by Commissioner Marcotte and carried, all members voting yes to adjourn the meeting at 1:21 p.m. until Tuesday, September 9, 2014 at 9:00 a.m.	**ADJOURN**

_____
J. Mark Wedel, Chairperson
Aitkin County Board of Commissioners

_____
Nathan Burkett, County Administrator

2D

DKB1
8/27/14 2:02PM

Aitkin County

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Print List in Order By: 2
1 - Fund (Page Break by Fund)
2 - Department (Totals by Dept)
3 - Vendor Number
4 - Vendor Name

Page Break By: 1
1 - Page Break by Fund
2 - Page Break by Dept

Explode Dist. Formulas N

Paid on Behalf Of Name on Audit List?: N

Type of Audit List: D
D - Detailed Audit List
S - Condensed Audit List

Save Report Options?: N

Taconite Payments to Towns & Cities

Aitkin County

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name / Account/Formula	Rpt Accr	Amount	Warrant Description / Service Dates	Invoice # / Paid On Bhf #	Account/Formula Description / On Behalf of Name
931	DEPT			Towns		
1010	City Of Aitkin					
	12-931-156-0000-2045		4,066.00	2013 Taconite - 2nd Half		Payable To Village Of Aitkin
1010	**City Of Aitkin**		4,066.00	1 Transactions		
176	City Of Palisade					
	12-931-160-0000-2045		287.00	2013 Taconite - 2nd Half		Payable To Village Of Palisade
176	**City Of Palisade**		287.00	1 Transactions		
7000	Town Of Aitkin Treasurer					
	12-931-101-0000-2045		4,127.00	2013 Taconite - 2nd Half		Payable To Aitkin Twp
7000	**Town Of Aitkin Treasurer**		4,127.00	1 Transactions		
7006	Town Of Farm Island Treasurer					
	12-931-107-0000-2045		10,646.00	2013 Taconite - 2nd Half		Payable To Farm Island Twp
7006	**Town Of Farm Island Treasurer**		10,646.00	1 Transactions		
7007	Town Of Fleming Treasurer					
	12-931-108-0000-2045		3,835.00	2013 Taconite - 2nd Half		Payable To Fleming Twp
7007	**Town Of Fleming Treasurer**		3,835.00	1 Transactions		
7008	Town Of Glen Treasurer					
	12-931-109-0000-2045		4,422.00	2013 Taconite - 2nd Half		Payable To Glen Twp
7008	**Town Of Glen Treasurer**		4,422.00	1 Transactions		
7010	Town Of Hazelton Treasurer					
	12-931-111-0000-2045		7,906.00	2013 Taconite - 2nd Half		Payable To Hazelton Twp
7010	**Town Of Hazelton Treasurer**		7,906.00	1 Transactions		
7013	Town Of Kimberly Treasurer					
	12-931-115-0000-2045		1,247.00	2013 Taconite - 2nd Half		Payable To Kimberly Twp
7013	**Town Of Kimberly Treasurer**		1,247.00	1 Transactions		
7014	Town Of Lakeside Treasurer					
	12-931-116-0000-2045		423.00	2013 Taconite - 2nd Half		Payable To Lakeside Twp
7014	**Town Of Lakeside Treasurer**		423.00	1 Transactions		
7015	Town Of Lee Treasurer					
	12-931-117-0000-2045		187.00	2013 Taconite - 2nd Half		Payable To Lee Twp

Aitkin County

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name / Account/Formula	Rpt Accr	Amount	Warrant Description / Service Dates	Invoice # / Paid On Bhf #	Account/Formula Description / On Behalf of Name
7015	**Town Of Lee Treasurer**		187.00	1 Transactions		
7016	**Town Of Libby Treasurer**					
	12-931-118-0000-2045		474.00	2013 Taconite - 2nd Half		Payable To Libby Twp
7016	**Town Of Libby Treasurer**		474.00	1 Transactions		
7017	**Town Of Logan Treasurer**					
	12-931-119-0000-2045		904.00	2013 Taconite - 2nd Half		Payable To Logan Twp
7017	**Town Of Logan Treasurer**		904.00	1 Transactions		
7019	**Town Of Malmo Treasurer**					
	12-931-121-0000-2045		2,606.00	2013 Taconite - 2nd Half		Payable To Malmo Twp
7019	**Town Of Malmo Treasurer**		2,606.00	1 Transactions		
7022	**Town Of Morrison Treasurer**					
	12-931-123-0000-2045		844.00	2013 Taconite - 2nd Half		Payable To Morrison Twp
7022	**Town Of Morrison Treasurer**		844.00	1 Transactions		
7023	**Town Of Nordland Treasurer**					
	12-931-124-0000-2045		6,628.00	2013 Taconite - 2nd Half		Payable To Nordland Twp
7023	**Town Of Nordland Treasurer**		6,628.00	1 Transactions		
7030	**Town Of Spencer Treasurer**					
	12-931-131-0000-2045		2,020.00	2013 Taconite - 2nd Half		Payable To Spencer Twp
7030	**Town Of Spencer Treasurer**		2,020.00	1 Transactions		
7032	**Town Of Verdon Treasurer**					
	12-931-133-0000-2045		56.00	2013 Taconite - 2nd Half		Payable To Verdon Twp
7032	**Town Of Verdon Treasurer**		56.00	1 Transactions		
7034	**Town Of Waukenabo Treasurer**					
	12-931-135-0000-2045		3,073.00	2013 Taconite - 2nd Half		Payable To Waukenabo Twp
7034	**Town Of Waukenabo Treasurer**		3,073.00	1 Transactions		
7035	**Town Of Wealthwood Treasurer**					
	12-931-136-0000-2045		2,332.00	2013 Taconite - 2nd Half		Payable To Wealthwood Twp
7035	**Town Of Wealthwood Treasurer**		2,332.00	1 Transactions		
7038	**Town Of Workman Treasurer**					

Aitkin County

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Vendor No.	Name / Account/Formula	Rpt Accr	Amount	Warrant Description / Service Dates	Invoice # / Paid On Bhf #	Account/Formula Description / On Behalf of Name
	12-931-139-0000-2045		134.00	2013 Taconite - 2nd Half		Payable To Workman Twp
7038	**Town Of Workman Treasurer**		134.00	1 Transactions		
931	**DEPT Total:**		56,217.00	**Towns**	**20 Vendors**	**20 Transactions**
12	**Fund Total:**		56,217.00	**Agency**		**20 Transactions**
	Final Total:		56,217.00	**20 Vendors**	**20 Transactions**	

Aitkin County

Audit List for Board AUDITOR'S VOUCHERS ENTRIES

Recap by Fund	Fund	AMOUNT	Name
	12	56,217.00	Agency
	All Funds	56,217.00	Total

Approved by, ...

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Aitkin County

Board of County Commissioners Agenda Request

2E
Agenda Item #

Requested Meeting Date: 9/9/14

Title of Item: County tax forfeited land sale 10/14/14

☐ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☑ CONSENT AGENDA	☐ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☑ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	**provide copy of hearing notice that was published*	

Submitted by:	**Department:** Land
Presenter (Name and Title): Mark Jacobs - Land Commissioner	**Estimated Time Needed:** n/a

Summary of Issue:
A number of parcels did not sell at our last land sale. They have been re-appraised and are being proposed for sale on October 14, 2014.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:
Approve attached resolution (date/time/location, appraisals).

Financial Impact:
Is there a cost associated with this request? ☐ *Yes* ☑ *No*
What is the total cost, with tax and shipping? $
Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*
n/a

Legally binding agreements must have County Attorney approval prior to submission.

CERTIFIED COPY OF RESOLUTION OF COUNTY BOARD OF AITKIN COUNTY, MINNESOTA

ADOPTED September 9, 2014

By Commissioner: xx **090914-0xx**

County Tax Forfeited Land Sale

WHEREAS, the classification of the following county owned and tax-forfeited lands to be offered for sale has been made by the County Board in accordance with Minnesota Statues 282, and

WHEREAS, a public hearing was held on March 6, 2012 at 10:00 am in the Aitkin County Courthouse regarding the classification of the attached lands and classified them to dispose of, and

WHEREAS, the County Board has made appraisals of the lands classified as non-conservation and of the timber and timber products thereon, and has made appraisal of timber and buildings on such lands as have not been classified, and a list of such lands and timber, timber only and of buildings so appraised has been filed with the County Auditor for the purpose of offering lands, timber and buildings, so listed, for sale at not less than the appraised value of the land, timber, and buildings combined, with said appraisals of each property following, and

WHEREAS, the County Board is by law designated with authority to provide for the sale of such lands on terms:

NOW, THEREFORE BE IT RESOLVED, that such parcels shall be sold on the following terms, to wit: That on sales amounting to $5,000.00 or less per parcel, the purchase price shall be paid in full at the time of purchase. On sales amounting to more than $5,000.00 per parcel, the purchaser shall pay a minimum of $5,000.00 down or 25% of the purchase price (whichever is greater) with the privilege of paying the balance over 5 years with the balance amortized over the 5 years plus interest at the rate according to Minnesota Statutes 282.01, Subdivision 4, on the deferred balance. Any remaining balance may be paid at any time. If the property is purchased on a contract for deed, a $46.00 fee will be required at the time of purchase for the recording of the contract. Any contract for deeds on properties on this sale, are required to be recorded. Any property with a known well on it will be charged a $50.00 fee for recording the well certificate.

BE IT FURTHER RESOLVED, that in case any parcel of land bearing standing timber, buildings or timber products is sold at public auction for more than the appraised value, the amount bid in excess of the appraised value shall be allocated between the land, buildings, and timber in proportion to the respective appraised value. The purchaser of tax-forfeited land at such sale shall be entitled to immediate possession, subject to the provision of any existing lease made in behalf of the State.

BE IT FURTHER RESOLVED, that notice of such sale of lands, timber and buildings be given by publication in the official newspaper of the County as provided by law; that the County Auditor of Aitkin County offer such parcels of land for sale in the order in which they appear in said NOTICE OF SALE, and that such sale shall commence at 2:00 P.M. on Tuesday, the 14th day of October, 2014 and continue until all parcels classified as non-conservation and timber only, buildings on parcels not classified, are offered to the highest bidder for sale. This sale will be held at the Aitkin County Courthouse in Aitkin, Minnesota.

BE IT FURTHER RESOLVED, as required by Minnesota Statutes 284.28, there will be added to the sale price of any tax-forfeited lands sold, an amount equal to three percent of the total sale price. Said additional amount to be deposited in the State Treasury and credited to the State Real Estate Assurance Fund.

BE IT FURTHER RESOLVED, that the Land Commissioner may withdraw any description on the list, later subject to the approval of the County Board, when it may appear to be in the public interest to do so.

BE IT FURTHER RESOLVED, Minnesota Statutes 282.014, imposes a $25.00 fee upon purchasers of tax-forfeited land for issuance of a State Deed.

BE IT FURTHER RESOLVED, as required by Minnesota Statutes 282.01, Subdivision 6, all State Tax Deeds must be recorded with the County Recorder prior to issuing the Deed to the purchaser, therefore a recording fee for each State Deed issued must be paid to the Aitkin County Recorder by the purchaser when tax-forfeited land is paid for in full, as required in MS 357.18.

BE IT FURTHER RESOLVED, as required by Minnesota Statutes 287.22, all State Tax Deeds are subject to State Deed Tax which must be paid by the purchaser.

BE IT FURTHER RESOLVED, Aitkin County is not responsible for location of or determining property lines or boundaries.

BE IT FURTHER RESOLVED, that all lands sold hereunder are sold subject to the Zoning Ordinance adopted by the County Board, and all lands are sold subject to railroad and highway easements, power and pipeline easements, any recreational easements, and subject to all flowage rights, and

BE IT FURTHER RESOLVED, that except in the case of Deeds issued for platted property and Deeds issued to correct errors in either legal description or grantees, the Deeds issued for these parcels will contain a restrictive covenant which will prohibit enrollment of the land in a State Funded program providing compensation of marginal land or wetlands.

Aitkin County does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in employment and the provision of services. Prospective bidders who require special accommodations to participate in this sale should inform the Land Department as soon as possible and more than three working days before the sale. You may write to Aitkin County Land Department at 209 2nd St. NW Room 206 Aitkin, MN.56431 or call 218-927-7364.

	Parcel ID Number	Access	Legal Description	Sec	Twp	Rge	Acres	Starting price at Auction
1	34-0-039404	*	1 acre Lot 3 as in Document #179645 less hwy r/w	24	43	22	0.48	$5,000.00
2	26-0-056600 and 26-0-057500	None	SE-NE and NE-SE	35	46	23	80	$20,100.00
3	29-1-366000 to 29-1-366300	*	Big Sandy Lake Highlands Lots 163, 164, 165, 166	3	49	23		$9,000.00
4	02-1-075100	*	Hay U – Lot 5	26	52	23	0.53	$10,000.00
5	15-0-055300	none	NE-SE	32	47	25	40	$5,800.00
6	12-1-075600	*	Quadna Mountain View Lot 2 Blk 1	2	52	26	0.98	$2,300.00

7	12-0-041606	*	150 x 155 in Govt Lot 1	23	52	26	0.53	$2,000.00
			City of Aitkin Tibbetts Irregular Lots in Aitkin					
8	56-1-122800	*	W 8 rods of Lot 16	24	47	27	0.61	$5,000.00
			City of Aitkin Jenkins Acre Lots					
9	56-1-162700	*	N 150' of E 50' of Lot 10	26	47	27	0.17	$4,000.00
			City of Hill City Buck's Addn to Hill City					
10	57-1-019900	*	Lot 12 Blk 14	14	52	26	0.16	$1,500.00

Commissioner xx moved the adoption of the resolution and it was declared adopted upon the following vote

FIVE MEMBERS PRESENT All Members Voting Yes

STATE OF MINNESOTA)
County of Aitkin) ss.
Office of County Auditor,)

I, Kirk Peysar, Auditor, of the County of Aitkin, do hereby certify that I have compared the foregoing with the original resolution filed in my office on the 9th day of September A.D., 2014, and that the same is a true and correct copy of the whole thereof.

WITNESS MY HAND AND SEAL OF OFFICE at Aitkin, Minnesota, this 9th day of September A.D., 2014

KIRK PEYSAR, County Auditor
BY _____, Deputy

Aitkin County

Board of County Commissioners Agenda Request

2F
Agenda Item #

Requested Meeting Date: 09/09/14

Title of Item: Scrap Forfeited Vehicle, Sell Forfeited Vehicles

☐ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☑ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	provide copy of hearing notice that was published	

Submitted by: Sheriff Scott Turner	**Department:** Sheriff's Office
Presenter (Name and Title): n/a	**Estimated Time Needed:** n/a

Summary of Issue:

Seeking to sell the following vehicle as salvage:

- 1996 Mercury Villager Van, with 136,544 miles, and considered in "fair condition"

Seeking to sell at auction the following vehicles:

- 1998 Chevrolet Venture Van, 176,841 miles
- 1996 Cadillac Seville Sedan, 268,615 miles
- 1995 Jeep Grand Cherokee, 243,426 miles
- 1997 Jeep Grand Cherokee, 133,908 miles

All of the above vehicles were forfeited under Minnesota DWI laws.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:
Approve sale of vehicles listed above.

Financial Impact:
Is there a cost associated with this request? ☐ *Yes* ☑ *No*
What is the total cost, with tax and shipping? $
Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

Aitkin County

Board of County Commissioners Agenda Request

2G
Agenda Item #

Requested Meeting Date: Sept. 9, 2014

Title of Item: Medical Examiner Contract 2015

☐ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☑ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	provide copy of hearing notice that was published	

Submitted by:
Sheriff Scott Turner

Department:
Sheriff's Office

Presenter (Name and Title):
n/a

Estimated Time Needed:
n/a

Summary of Issue:

Michael B. McGee, M.D., Medical Examiner Contract for 2015

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:
Approve 2015 Medical Examiner Contract and authorize signatures.

Financial Impact:
Is there a cost associated with this request? ☑ *Yes* ☐ *No*
What is the total cost, with tax and shipping? $
Is this budgeted? ☑ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

MEMORANDUM

To: Sheriff Turner

From: M .B. McGee, MD

Date: August 25, 2014

Re: Medical examiner contract for 2015

Attached please find a copy of the contract for Medical Examiner services for 2015.

The language within the attached contract for 2015 remains unchanged from the previous year. The minimum level for liability insurance has been increased and is noted

Compensation in the contract will not change for 2015 with the rates remaining at the same level that are currently in effect.

If you or the administrative staff for Aitkin County should have any questions regarding the contract please contact me at your convenience.

Office direct 651-266-1727
Email mbmcgeepa@hotmail.com

P.A. CONTRACT AGREEMENT

Agreement entered into this 1st day of January, 2015 by and between the County of Aitkin, a political subdivision of the State of Minnesota, and M.B. McGee, P.A. for the services of Dr. Michael B. McGee, M.D. as Medical Examiner of Aitkin County.

I. Relationship of Parties

A. Pursuant to County Board action that took place on _____ and the authority of Minnesota Statutes Ch. 390, the board of Aitkin County commissioners designates Dr. Michael B. McGee as Medical Examiner for Aitkin County, hereinafter "the Medical Examiner."

B. It is agreed that nothing contained in the Agreement is intended or should be construed as creating the relationship of co-partners, joint ventures or an association or an employer/employee relationship between Aitkin Countyand Dr. Michael B. McGee, M.B. McGee, P.A., or their employees or designee. M.B. McGee, P.A., is an independent contractor, and neither it, its officers, agents or employees shall be considered agents or representatives of the County. The County is interested only in the results to be achieved. The manner and means of conducting the works are under the control of the Medical Examiner, except to the extent they are limited by statute or regulation and the express terms of this Agreement. None of the benefits provided by the County to its employees, including, without limitation, unemployment insurance, workers' compensation insurance, retirement and deferred compensation plans, vacation and sick leave, are available from the County to the Medical Examiner, M.B. McGee, P.A., or the employees, agents or contractors of either. No civil service status shall attach to the Medical Examiner, Medical Staff, agent of contractors of the Medical Examiner or M.B. McGee, P.A. and the County shall make no deductions from sums payable under the terms of this Agreement for state or federal income taxes, FICA, PERA or other payroll type deductions which are associated with an employer-employee relationship.

II. Personnel

A. The Medical Examiner will designate Dr. Kelly Mills, Dr. Victor Froloff and Dr. Butch Huston to assist in performing the contract and shall be under the control and supervision of the Medical Examiner. Dr. Mills, Dr. Froloff and Dr. Huston shall not be considered employees of the County, nor have a contractual relationship with the County. The County shall be notified prior to the effective date of any changes thereto.

B. The non-medical personnel necessary to support the Medical Examiner in the performance of his duties under this Agreement shall be provided through the County Sheriff's Department. The compensation, benefits,

and other terms of employment of these non-medical personnel shall be determined and paid solely by the county.

III. **Scope of Duties**

A. The Medical Examiner shall be responsible for conducting a modern medico-legal investigative system for Aitkin County applying the standards of the National Association of Medical Examiners, as they may be amended from time to time. The Medical Examiner shall periodically consult with the County Attorney's Office, police agencies, and others concerned with forensic pathology to review procedures and formats for preparing medical reports and protocols. The Medical Examiner shall perform all duties imposed by Minnesota Statutes Chapter 390, as well as the duties imposed by other statutes applicable to the Medical Examiner's activities. The Medical Examiner shall testify, as required, at inquests, hearings and trials.

B. The Medical Examiner shall be responsible for the final determination of the cause and manner of death, and the signing of certificates attesting the cause and manner of death. During the temporary absence of the Medical Examiner, a qualified person designated by the Medical Examiner may make the final determination of death, and sign a certificate attesting to the cause and manner of death.

C. The Medical Examiner shall be entitled to perform other gainful activities which do not interfere with the performance of his duties hereunder.

IV. **Compensation**

A. All payments made under this agreement for services rendered by or at the designation of Dr. Michael B. McGee, M.D. shall be made to M.B. McGee, P.A.

B. The County will be responsible for the payment for each complete autopsy or external examination performed by Dr. Michael B. McGee, M.D., or his assistants, as the Medical Examiner pursuant to this agreement and billed to Aitkin County upon completion of each examination in keeping with the past practice of the County Medical Examiner's Office.

C. Compensation for the services under this contract shall be $250.00/month plus the following on a per service basis: (1) complete forensic autopsy with basic toxicology, at approximately $2,000, and (2) external examination with basic toxicology at approximately $1000.

D. Additionally, the County will be responsible for court related preparation / consultation and out of office charges, billed on an hourly basis of $300/hr., including travel to and from Aitkin County in order to provide testimony in legal proceedings arising out of the duties of the Medical Examiner.

V. **Facilities**

The facility, together with all the necessary equipment, the supplies, shall be the responsibility of Dr. Michael B. McGee. It is represented by Dr. Michael B. McGee and understood by the County that Ramsey County Morgue shall be available to Dr. Michael B. McGee for the performance of this agreement.

VI. **Insurance and Indemnification**

A. M.B. McGee, P.A. agrees to indemnify and hold harmless the County of Aitkin, its officials, employees and agents from any and all liability, loss or damage, that the County of Aitkin, its officials, employees and agents may suffer as a result of claims, demands, costs of judgments, including without limitation reasonable attorney's fees arising out of the provision of professional services by Dr. Michael B. McGee, M.D., as the Medical Examiner of Aitkin County pursuant to Minnesota Statutes Ch. 390, provided, however, that this indemnification shall be limited to the extent of such claims, demands, costs or judgments, including, without limitation, reasonable attorney's fees are covered by insurance.

B. The County of Aitkin agrees to indemnify and hold harmless M.B. McGee, P.A., Dr. Michael B. McGee, M.D., its and their agents, officers or employees from any and all liability, loss or damage, it, he, its agents, officers or employees may suffer as a result of claims, demands, costs or judgments, including without limitation reasonable attorney's fees, arising from the Medical Examiner's or his agents' performance of his or their duties under this Agreement.

C. M.B. McGee, P.A., shall obtain and keep in effect the following insurance coverage:

1) Comprehensive General Liability Insurance:

(a) Minimum Combined Single Limit
$2,000,000 per occurrence
$4,000,000 aggregate

(a) The following coverage must be specifically insured and certified with no internal sublimits.

1. Independent Contractors' Contingent Liability
2. Products/Completed Operations Liability
3. Contractual Liability
4. Personal Injury Liability including claims related to employment and coverage (a) through (e).
5. Broad Form Property Damage Liability, or deletion of the "Care, Custody and Control" Exclusion
6. Aircraft Liability (if applicable)
7. Watercraft Liability (if applicable)

(b) The Contractual Liability is to be either on a blanket basis for all written and oral contracts or specifically endorsed to acknowledge the contract between the insured and the County.

2. Professional Liability Insurance

Minimum Limits
$2,000,000 per occurrence
$4,000,000 aggregate

3. Automobile Liability Insurance on Vehicles Owned by M. B. McGee, P.A., or Michael B. McGee, M.D., Kelly Mills, M.D., Victor Froloff, M.D., or Butch Huston, M.D.

D. All certificates of insurance shall provide that the insurance company shall give the County thirty (30) days prior written notice of cancellation, non-renewal or any material changes in the policy.

E. The above subparagraphs establish the minimum insurance requirements, and it is the sole responsibility of M. B. McGee, P.A. to purchase and maintain additional insurance that may be necessary in connection with this contract.

F. The Medical Examiner shall provide a certificate of insurance to the County in a form acceptable to Aitkin County. All insurance policies shall be submitted to the County upon written request.

G. Nothing in this contract shall constitute a waiver by the County of any statutory limits or exceptions on liability.

VII. **Transportation**

A. Transportation of the deceased bodies from Aitkin County to the Ramsey County Morgue shall be the responsibility of Aitkin County.

VIII. **Miscellaneous Provisions**

A. The Medical Examiner and all the members of the Medical Staff must be licensed to practice in Minnesota, with the Medical Examiner holding certification by the American Board of Pathology.

B. At the termination of this Agreement, the Medical Examiner shall return all files, records and objects related to cases completed, or in progress, to the County upon written request.

IX. **Term and Termination**

A. This agreement shall continue for a period ending December 31, 2015 unless terminated sooner pursuant hereto.

B. This Agreement may be terminated by either party on forty-five (45) days written notice to the other.

C. This Agreement may be renewed on an annual basis upon agreement of both parties.

X. **Entire Agreement, Modification**

A. It is understood and agreed that the entire Agreement of the parties is contained herein, and that this Agreement supersedes all oral agreements and negotiations between the parties relating to the subject matter hereof, as well as any previous Agreements presently in effect between the parties relating to the subject matter hereof.

B. This Agreement shall be altered, varied, modified or amended only in writing duly executed by the parties and attached hereto.

COUNTY OF AITKIN

_____ By_____
(date) Aitkin County Board Chair

_____ By_____
(date) Aitkin County Administrator

_____ _____
(date) Michael B. McGee, M.D.
Medical Examiner

M. B. McGee, P.A.

_____ By_____
(date) M. B. McGee, President

Aitkin County

Board of County Commissioners Agenda Request

2H
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Sobriety Court Donation

☐ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☑ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	provide copy of hearing notice that was published	

Submitted by: Jill McKenzie	**Department:** Sobriety Court
Presenter (Name and Title): n/a	**Estimated Time Needed:** n/a

Summary of Issue:

Please see attached memo.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

Accept donation of $194.51 to Aitkin County Sobriety Court.

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☑ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

AITKIN COUNTY SOBRIETY COURT

204 1st St NW, Aitkin, MN 56431
218-831-8438

MEMO

To: Board of Commissioners

Date: 8/27/14

From: Aitkin County Sobriety Court

Re: Cash donation

On August 8, 2014, the Aitkin County Sobriety Court clients hosted a bratwurst sale in conjunction with Paulbeck's County Market. The clients would like to donate the profit of that sale to Aitkin County Sobriety Court with a cash donation of $194.51

Sincerely,

Jill McKenzie, Coordinator

Board of County Commissioners Agenda Request

Aitkin County

2I
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Affidavit for Duplicate of lost Municipal Order or Warrant

☐ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☑ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	**provide copy of hearing notice that was published*	

Submitted by:
Julie Hughes, Chief Deputy

Department:
Treasurer

Presenter (Name and Title):
N/A

Estimated Time Needed:
N/A

Summary of Issue:
Approve affidavit for Duplicate of Lost Municipal Order or Warrant:
James Glassing - Refund check 6854 in the amount of 8.04
Connie Gretschmann - Refund check 6917 in the amount of 163.00

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:
Approve affidavit for Duplicate of Lost Municipal Order or Warrant:
James Glassing - Refund check 6854 in the amount of 8.04
Connie Gretschmann - Refund check 6917 in the amount of 163.00

Financial Impact:
Is there a cost associated with this request? ☐ *Yes* ☑ *No*
What is the total cost, with tax and shipping? $
Is this budgeted? ☑ *Yes* ☐ *No* *Please Explain:*
duplicate check

Legally binding agreements must have County Attorney approval prior to submission.

Affidavit for Duplicate of Lost Municipal Order or Warrant

STATE OF MINNESOTA,

County of Aitkin) ss James Glassing or Janette Glassing

being duly sworn, on oath says; that (s)he is the owner of a certain Refund check, dated

the Twenty-first Day of December, 2010 Numbered 6854 issued by Aitkin County to James Glassing or Janette Glassing

in the sum of 8.04 which has been Lost in the manner

("Lost" or "Destroyed")

following, to wit:

and that (s)he makes this affidavit for the purpose of having a duplicate thereof issued to him (her)

according to law; and to that end herewith files his (her) indemnifying bond, with sureties to be

approved, in the sum equal to double the amount of said Refund Check.

Subscribed and sworn to before me this 4th day of August, 2014

Notary Public Hennepin County, Minnesota

My Commission Expires 1-31-18

STACI L MUNSTERMAN
NOTARY PUBLIC - MINNESOTA
MY COMMISSION EXPIRES 01/31/18

Affidavit for Duplicate of Lost Municipal Order or Warrant

STATE OF MINNESOTA,
)
County of Aitkin) ss Connie Gretschmann
)

being duly sworn, on oath says; that (s)he is the owner of a certain Refund check, dated the Fifteenth Day of June, 2011 Numbered 6917 issued by Aitkin County to Connie Gretschmann in the sum of 163.00 which has been lost in the manner
("Lost" or "Destroyed")
following, to wit:

and that (s)he makes this affidavit for the purpose of having a duplicate thereof issued to him (her) according to law; and to that end herewith files his (her) indemnifying bond, with sureties to be approved, in the sum equal to double the amount of said Refund Check.

Connie Gretschmann

Subscribed and sworn to before me this 13th day of August, 2014

JULIE A LANDRUS
Notary Public
Minnesota
My Comm. Expires
Jan 31, 2015

Notary Public Julie A Landrus Aitkin County, Minnesota

My Commission Expires 1-31-15

Aitkin County

Board of County Commissioners Agenda Request

25
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Application for Cancellation of Forfeiture

☐ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☑ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	provide copy of hearing notice that was published	

Submitted by: Kirk Peysar	**Department:** Auditor
Presenter (Name and Title): Kirk Peysar	**Estimated Time Needed:** NA

Summary of Issue:

Application for cancellation of forfeiture for parcel in Palisade. See Attached

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

Approve application for cancellation of forfeiture - Pt Vacated Perry Street, Palisade.

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☑ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

MINNESOTA · REVENUE

PT Form 90

Application for Cancellation of Forfeiture

In Aitkin County

Name and Address of Applicant:

Aitkin County Auditor
209 2nd Street NW Room 202
Aitkin MN 56431

Applicant Is:
X County Auditor
_____ Property Owner
_____ Owner's Agent

Legal Description of Property Forfeited:
(Attach additional sheet if needed)

Pt Vacated Perry Street
(Peary Street)

Certificate of Forfeiture for Property Described Above:

Date of Execution:	August	8	2014
	(Month)	*(Day)*	*(Year)*
Date of Recording:	August	11	2014
	(Month)	*(Day)*	*(Year)*

Place of Recording: Aitkin Co Recorder's Office 424212
(Office) *(Document Number)*

Reason for Cancellation: ____ Exemption X Administrative Error
(Explain in detail — attach additional sheet if needed)

See Attached

Applicant's Request:

Applicant requests that the certificate of forfeiture for the property described above be canceled, and that the county auditor be ordered to record this application for cancellation of forfeiture as a certificate of cancellation pursuant to Minnesota Statutes, Sections 279.33 and 279.34, which will void the tax forfeiture of the property described above.

Applicant's Signature: Kathy Swanson, County Auditor

Date of Signature: 8 / 14 / 2014
(Month) *(Day)* *(Year)*

Return Application along with a duplicate copy to: MN Department of Revenue, Property Tax Division
Mail Station 3340, St. Paul MN 55146-3340

(Revised 10/22/96)

MINNESOTA · REVENUE **PT Form 90**

Approval by County Board and County Auditor

Certification of Approval:

The county board, by resolution, and the county auditor approve the application and recommend its acceptance by the Department of Revenue.

Resolution Number: _____ Meeting Date: _____

_____ _____

Clerk's Signature Date of Signature

_____ _____

County Auditor's Signature Date of Signature

Order of the Department of Revenue - State of Minnesota

REJECTION

Upon examination of the contents of the application, it is ordered that the application be rejected.

_____

Commissioner of Revenue

By: _____

Reason for Rejection:

ACCEPTANCE

Upon examination of the contents of the application, it is ordered that the application be accepted, that the certificate of forfeiture be canceled, and that the county auditor record this application for cancellation of forfeiture as a certificate of cancellation pursuant to Minnesota Statutes, Sections 279.33 and 279.34, which will void the tax forfeiture of the property described in the application.

_____

Commissioner of Revenue

By: _____

County Auditor's Number: _____

Department of Revenue's Number: _____

Date Application Received by the Department of Revenue: _____

(Revised 10/22/96)

Reason for Cancellation

This part of vacated Peary Street was left as a separate parcel instead of connecting and transferring with adjacent lot. According to MS 507.17 Every conveyance of real estate which abuts upon a vacated street, alley, or other public right-of-way shall be construed to include that part of such right-of-way or street which, either by operation or presumption of law, attaches thereto upon such vacation , unless such conveyance expresses a contrary intention.

This vacated part of Peary Street abuts Lot 6 Block 1 of Palisade and should have been attached and transferred with said lot when it was sold.

Aitkin County

Board of County Commissioners Agenda Request

3A
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Award S.P. 001-610-022/025

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☐ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☑ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: John Welle	**Department:** Highway Department
Presenter (Name and Title): John Welle, Aitkin County Engineer	**Estimated Time Needed:** 10 minutes

Summary of Issue:

The attached abstract of bids shows results of ten bids opened for this project on August 25, 2014. Anderson Brothers submitted the low bid of $4,797,893.90 which was 7.2% above the engineer's cost estimate of $4,474,826.25. Note that the engineers cost estimate was based on 2014 construction costs, as the project was submitted for approval in early March, 2014, with anticipated construction during 2014. Due to delay obtaining final plan approval, construction of the project was delayed to 2015, however, the cost estimate was not updated to reflect 2015 cost increases.

Funding available for this project is as follows:

Great River Road Federal High Priority Project funds	$2,155,951
Federal Senic Byway funds	$ 720,000
State-Aid Construction Funds	$ 962,363
Local funds for 20% match	$ 959,579
Total:	$4,797,893

Although it was not originally anticipated that our state-aid construction funds would be used for any of the Great River Road projects, it is the only remaining available funding source if we wish to move forward with the project at this time.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

Recommend award of S.P. 00-1610-022/025 to Anderson Brothers by attached resolution.

Financial Impact:

Is there a cost associated with this request? ☑ *Yes* ☐ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☑ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

CERTIFIED COPY OF RESOLUTION OF COUNTY BOARD OF AITKIN COUNTY, MINNESOTA

ADOPTED September 9, 2014

By Commissioner: xx **090914-0xx**

Award S.P. 001-610-022/025

WHEREAS, Contract No. 20142 includes projects S.P. 001-610-022 and S.P. 001-610-025 for grading, aggregate base, and bituminous pavement on Aitkin County State-Aid Highway 10 from U.S. Highway 169 to Aitkin County State-Aid Highway 3, and

WHEREAS, sealed bids were opened for this project at 2:00 p.m. on Monday, August 25, 2014 with a total of ten bids received, and

WHEREAS, Anderson Brothers was the lowest responsible bidder in the amount of $4,797,893.90.

NOW, THEREFORE, BE IT RESOLVED, that Anderson Brothers be awarded Contract No. 20142.

BE IT FURTHER RESOLVED, that the chairperson of the Aitkin County Board and the Aitkin County Auditor are hereby authorized and directed to enter into a contract on behalf of Aitkin County with said low bidder upon presentation of proper contract documents.

Commissioner xx moved the adoption of the resolution and it was declared adopted upon the following vote

FIVE MEMBERS PRESENT All Members Voted Yes

STATE OF MINNESOTA)
County of Aitkin) ss.
Office of County Auditor,)

I, Kirk Peysar, Auditor, of the County of Aitkin, do hereby certify that I have compared the foregoing with the original resolution filed in my office on the 9th day of September A.D., 2014, and that the same is a true and correct copy of the whole thereof.

WITNESS MY HAND AND SEAL OF OFFICE at Aitkin, Minnesota, this 9th day of September A.D. 2014

KIRK PEYSAR, County Auditor
BY _____, Deputy

Aitkin County
Contract Bid Abstract

Contract Number: 20142 - SP 001-610-025			Engineer's Estimate		Anderson Brothers Brainerd, MN		Knife River Sauk Rapids, MN		Hardrives, Inc St. Cloud, MN		KGM Angora, MN		Gladen Construction Laporte, MN		Tri City Paving Little Falls, MN		Central Specialties Inc Alexandria, MN		Ulland Brothers Cloquet, MN		Hammerlund Construction Inc Grand Rapids, MN		Landwehr Construction St. Cloud, MN	
Item #	Description	Units	Contract Quantity	Unit Price	Total Price																			
2021.501	MOBILIZATION	LS	0.57	$140,000.00	$79,800.00	$55,000.00	$31,350.00	$100,000.00	$57,000.00	$141,500.00	$80,655.00	$165,000.00	$94,050.00	$242,000.00	$137,940.00	$210,000.00	$119,700.00	$350,000.00	$199,500.00	$128,000.00	$72,960.00	$325,000.00	$185,250.00	$71,000.00	$40,470.00
2211.501	AGGREGATE BASE CLASS 5	TON	904	$11.00	$9,944.00	$15.25	$13,786.00	$15.75	$14,238.00	$18.10	$16,362.40	$15.10	$13,650.40	$14.60	$13,198.40	$20.00	$18,080.00	$13.00	$11,752.00	$19.60	$17,718.40	$15.75	$14,238.00	$16.50	$14,916.00
2211.503	AGGREGATE BASE (CV) CLASS 5	C Y	38,231.00	$20.00	$764,620.00	$16.00	$611,696.00	$20.50	$783,735.50	$21.98	$840,317.38	$16.88	$645,339.28	$22.50	$860,197.50	$19.90	$760,796.90	$25.00	$955,775.00	$24.00	$917,544.00	$17.50	$669,042.50	$17.25	$659,484.75
2221.501	SHOULDER BASE AGGREGATE CLASS 1	TON	4,357.00	$13.00	$56,641.00	$14.00	$60,998.00	$13.65	$59,473.05	$17.00	$74,069.00	$16.25	$70,801.25	$18.75	$81,693.75	$20.00	$87,140.00	$15.00	$65,355.00	$18.00	$78,426.00	$22.00	$95,854.00	$15.50	$67,533.50
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	6,750.00	$1.25	$8,437.50	$2.50	$16,875.00	$2.40	$16,200.00	$2.25	$15,187.50	$2.85	$19,237.50	$2.35	$15,862.50	$2.50	$16,875.00	$0.01	$67.50	$2.40	$16,200.00	$2.50	$16,875.00	$2.75	$18,562.50
2360.501	TYPE SP 12.5 WEARING COURSE MIX (2,C)	TON	26,415.00	$60.00	$1,584,900.00	$60.00	$1,584,900.00	$63.00	$1,664,145.00	$58.42	$1,543,164.30	$57.30	$1,513,579.50	$57.80	$1,526,787.00	$67.00	$1,769,805.00	$64.46	$1,702,710.90	$60.30	$1,592,824.50	$58.90	$1,555,843.50	$67.50	$1,783,012.50
2563.601	TRAFFIC CONTROL	LS	0.57	$10,000.00	$5,700.00	$7,000.00	$3,990.00	$6,500.00	$3,705.00	$8,563.25	$4,881.05	$15,000.00	$8,550.00	$15,400.00	$8,778.00	$15,000.00	$8,550.00	$10,400.00	$5,928.00	$6,500.00	$3,705.00	$27,000.00	$15,390.00	$18,730.00	$10,676.10
2582.502	4" SOLID LINE WHITE-EPOXY	L F	74,050.00	$0.25	$18,512.50	$0.20	$14,810.00	$0.19	$14,069.50	$0.19	$14,069.50	$0.20	$14,810.00	$0.21	$15,550.50	$0.28	$20,734.00	$0.19	$14,069.50	$0.19	$14,069.50	$0.19	$14,069.50	$0.20	$14,810.00
2582.502	4" SOLID LINE YELLOW-EPOXY	L F	54,150.00	$0.25	$13,537.50	$0.20	$10,830.00	$0.19	$10,288.50	$0.19	$10,288.50	$0.21	$11,371.50	$0.21	$11,371.50	$0.28	$15,162.00	$0.19	$10,288.50	$0.19	$10,288.50	$0.20	$10,830.00	$0.20	$10,830.00
2582.502	4" BROKEN LINE YELLOW-EPOXY	L F	2,780.00	$0.25	$695.00	$0.20	$556.00	$0.19	$528.20	$0.19	$528.20	$0.21	$583.80	$0.21	$583.80	$0.28	$778.40	$0.19	$528.20	$0.19	$528.20	$0.20	$556.00	$0.20	$556.00
			Total for SP 01-610-025		**$2,542,787.50**		**$2,349,791.00**		**$2,623,382.75**		**$2,599,522.83**		**$2,391,973.23**		**$2,671,962.95**		**$2,817,621.30**		**$2,965,974.60**		**$2,724,264.10**		**$2,577,948.50**		**$2,620,851.35**
Contract Number: 20142 - SP 001-610-022																									
Item #	Description	Units	Contract Quantity	Unit Price	Total Price																			
2021.501	MOBILIZATION	LS	0.43	$140,000.00	$60,200.00	$141,000.00	$60,630.00	$185,000.00	$79,550.00	$118,000.00	$50,740.00	$186,000.00	$79,980.00	$242,000.00	$104,060.00	$210,000.00	$90,300.00	$350,000.00	$150,500.00	$163,500.00	$70,305.00	$325,000.00	$139,750.00	$105,000.00	$45,150.00
2051.501	MAINT & RESTORATION OF HAUL ROADS	LS	1	$1,000.00	$1,000.00	$1.00	$1.00	$1,000.00	$1,000.00	$1.00	$1.00	$2,500.00	$2,500.00	$2,500.00	$2,500.00	$1.00	$1.00	$1.00	$1.00	$5,000.00	$5,000.00	$8,500.00	$8,500.00	$15,700.00	$15,700.00
2101.511	CLEARING & GRUBBING	LS	1	$30,000.00	$30,000.00	$52,500.00	$52,500.00	$50,000.00	$50,000.00	$50,500.00	$50,500.00	$75,000.00	$75,000.00	$90,000.00	$90,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$50,000.00	$57,000.00	$57,000.00	$198,100.00	$198,100.00
2104.501	REMOVE PIPE CULVERTS	L F	1,905.00	$10.00	$19,050.00	$10.50	$20,002.50	$10.00	$19,050.00	$10.07	$19,183.35	$8.00	$15,240.00	$15.00	$28,575.00	$10.00	$19,050.00	$10.00	$19,050.00	$10.00	$19,050.00	$7.00	$13,335.00	$11.80	$22,479.00
2104.505	REMOVE BITUMINOUS PAVEMENT	S Y	6,078.00	$3.00	$18,234.00	$1.80	$10,940.40	$3.90	$23,704.20	$1.93	$11,730.54	$2.30	$13,979.40	$4.50	$27,351.00	$2.25	$13,675.50	$6.29	$38,230.62	$2.50	$15,195.00	$3.00	$18,234.00	$3.10	$18,841.80
2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	L F	282	$2.50	$705.00	$3.50	$987.00	$3.88	$1,094.16	$3.56	$1,003.92	$3.00	$846.00	$5.25	$1,480.50	$3.00	$846.00	$0.01	$2.82	$2.00	$564.00	$2.00	$564.00	$4.75	$1,339.50
2104.523	SALVAGE CONCRETE APRON	EACH	8	$175.00	$1,400.00	$260.00	$2,080.00	$250.00	$2,000.00	$260.00	$2,080.00	$300.00	$2,400.00	$250.00	$2,000.00	$250.00	$2,000.00	$250.00	$2,000.00	$300.00	$2,400.00	$150.00	$1,200.00	$155.00	$1,240.00
2105.501	COMMON EXCAVATION (P)	C Y	96,143.00	$3.25	$312,464.75	$4.25	$408,607.75	$4.00	$384,572.00	$4.25	$408,607.75	$3.53	$339,384.79	$4.30	$413,414.90	$4.10	$394,186.30	$4.10	$394,186.30	$4.75	$456,679.25	$5.50	$528,786.50	$4.80	$461,486.40
2105.521	GRANULAR BORROW (EV)	C Y	142,672.00	$6.00	$856,032.00	$8.50	$1,212,712.00	$8.00	$1,141,376.00	$8.36	$1,192,737.92	$10.95	$1,562,258.40	$8.05	$1,148,509.60	$8.30	$1,184,177.60	$8.30	$1,184,177.60	$10.55	$1,505,189.60	$11.00	$1,569,392.00	$11.10	$1,583,659.20
2105.603	OBLITERATE OLD ROADWAY	L F	819	$5.00	$4,095.00	$21.00	$17,199.00	$20.00	$16,380.00	$20.50	$16,789.50	$8.00	$6,552.00	$5.50	$4,504.50	$20.00	$16,380.00	$20.00	$16,380.00	$4.00	$3,276.00	$4.00	$3,276.00	$7.70	$6,306.30
2105.604	GEOTEXTILE FABRIC TYPE V	S Y	37,272.00	$2.00	$74,544.00	$1.75	$65,226.00	$1.85	$68,953.20	$1.86	$69,325.92	$2.00	$74,544.00	$1.55	$57,771.60	$1.85	$68,953.20	$1.85	$68,953.20	$1.60	$59,635.20	$1.50	$55,908.00	$2.25	$83,862.00
2451.513	FINE FILTER AGGREGATE (CV) (P)	C Y	45	$20.00	$900.00	$52.75	$2,373.75	$50.00	$2,250.00	$50.37	$2,266.65	$35.00	$1,575.00	$50.00	$2,250.00	$50.00	$2,250.00	$50.00	$2,250.00	$40.00	$1,800.00	$75.00	$3,375.00	$34.75	$1,563.75
2501.511	15" CS PIPE CULVERT	L F	1,652.00	$22.00	$36,344.00	$26.50	$43,778.00	$25.00	$41,300.00	$26.00	$42,952.00	$30.00	$49,560.00	$25.15	$41,547.80	$25.00	$41,300.00	$25.00	$41,300.00	$32.00	$52,864.00	$27.00	$44,604.00	$27.55	$45,512.60
2501.511	18" CS PIPE CULVERT	L F	130	$28.00	$3,640.00	$28.50	$3,705.00	$27.00	$3,510.00	$28.00	$3,640.00	$35.00	$4,550.00	$29.70	$3,861.00	$27.00	$3,510.00	$27.00	$3,510.00	$35.00	$4,550.00	$28.00	$3,640.00	$30.15	$3,919.50
2501.511	24" CS PIPE CULVERT	L F	136	$34.00	$4,624.00	$37.00	$5,032.00	$35.00	$4,760.00	$35.26	$4,795.36	$40.00	$5,440.00	$36.90	$5,018.40	$35.00	$4,760.00	$35.00	$4,760.00	$46.00	$6,256.00	$32.00	$4,352.00	$40.40	$5,494.40
2501.511	18" RC PIPE CULVERT	L F	714	$36.00	$25,704.00	$71.25	$50,872.50	$67.50	$48,195.00	$68.00	$48,552.00	$42.00	$29,988.00	$34.20	$24,418.80	$67.50	$48,195.00	$67.50	$48,195.00	$55.00	$39,270.00	$35.00	$24,990.00	$28.40	$20,277.60
2501.511	24" RC PIPE CULVERT	L F	376	$40.00	$15,040.00	$81.00	$30,456.00	$76.50	$28,764.00	$77.07	$28,978.32	$50.00	$18,800.00	$42.00	$15,792.00	$76.50	$28,764.00	$76.50	$28,764.00	$64.00	$24,064.00	$40.00	$15,040.00	$72.40	$27,222.40
2501.511	30" RC PIPE CULVERT CLASS III	L F	86	$70.00	$6,020.00	$100.00	$8,600.00	$92.50	$7,955.00	$93.19	$8,014.34	$72.00	$6,192.00	$61.10	$5,254.60	$92.50	$7,955.00	$92.50	$7,955.00	$88.00	$7,568.00	$57.00	$4,902.00	$96.80	$8,324.80
2501.511	36" RC PIPE CULVERT	L F	86	$90.00	$7,740.00	$135.00	$11,610.00	$130.00	$11,180.00	$130.97	$11,263.42	$95.00	$8,170.00	$82.45	$7,090.70	$130.00	$11,180.00	$130.00	$11,180.00	$114.00	$9,804.00	$80.00	$6,880.00	$122.00	$10,492.00
2501.511	42" RC PIPE CULVERT	L F	74	$110.00	$8,140.00	$165.00	$12,210.00	$156.00	$11,544.00	$157.16	$11,629.84	$120.00	$8,880.00	$108.65	$8,040.10	$156.00	$11,544.00	$156.00	$11,544.00	$115.00	$8,510.00	$105.00	$7,770.00	$150.65	$11,148.10
2501.515	15" GS PIPE APRON	EACH	82	$170.00	$13,940.00	$180.00	$14,760.00	$170.00	$13,940.00	$171.26	$14,043.32	$190.00	$15,580.00	$150.00	$12,300.00	$170.00	$13,940.00	$170.00	$13,940.00	$150.00	$12,300.00	$135.00	$11,070.00	$225.00	$18,450.00
2501.515	18" GS PIPE APRON	EACH	8	$220.00	$1,760.00	$190.00	$1,520.00	$180.00	$1,440.00	$181.34	$1,450.72	$225.00	$1,800.00	$187.80	$1,502.40	$180.00	$1,440.00	$180.00	$1,440.00	$160.00	$1,280.00	$175.00	$1,400.00	$235.00	$1,880.00
2501.515	24" GS PIPE APRON	EACH	6	$270.00	$1,620.00	$265.00	$1,590.00	$250.00	$1,500.00	$251.86	$1,511.16	$250.00	$1,500.00	$230.00	$1,380.00	$250.00	$1,500.00	$250.00	$1,500.00	$250.00	$1,500.00	$185.00	$1,110.00	$305.00	$1,830.00
2501.515	18" RC PIPE APRON	EACH	20	$500.00	$10,000.00	$550.00	$11,000.00	$525.00	$10,500.00	$528.91	$10,578.20	$560.00	$11,200.00	$478.00	$9,560.00	$525.00	$10,500.00	$525.00	$10,500.00	$650.00	$13,000.00	$525.00	$10,500.00	$540.00	$10,800.00
2501.515	24" RC PIPE APRON	EACH	10	$550.00	$5,500.00	$615.00	$6,150.00	$580.00	$5,800.00	$584.32	$5,843.20	$625.00	$6,250.00	$289.40	$2,894.00	$580.00	$5,800.00	$580.00	$5,800.00	$850.00	$8,500.00	$600.00	$6,000.00	$665.00	$6,650.00
2501.515	30" RC PIPE APRON	EACH	2	$750.00	$1,500.00	$750.00	$1,500.00	$700.00	$1,400.00	$705.21	$1,410.42	$800.00	$1,600.00	$733.75	$1,467.50	$700.00	$1,400.00	$700.00	$1,400.00	$950.00	$1,900.00	$775.00	$1,550.00	$830.00	$1,660.00
2501.515	36" RC PIPE APRON	EACH	2	$1,000.00	$2,000.00	$1,055.00	$2,110.00	$1,000.00	$2,000.00	$1,007.44	$2,014.88	$1,100.00	$2,200.00	$1,025.00	$2,050.00	$1,000.00	$2,000.00	$1,000.00	$2,000.00	$1,200.00	$2,400.00	$1,150.00	$2,300.00	$1,325.00	$2,650.00
2501.515	42" RC PIPE APRON	EACH	2	$1,350.00	$2,700.00	$1,250.00	$2,500.00	$1,200.00	$2,400.00	$1,208.93	$2,417.86	$1,500.00	$3,000.00	$1,242.00	$2,484.00	$1,200.00	$2,400.00	$1,200.00	$2,400.00	$1,600.00	$3,200.00	$1,400.00	$2,800.00	$1,560.00	$3,120.00
2501.573	INSTALL CONCRETE APRON	EACH	8	$225.00	$1,800.00	$265.00	$2,120.00	$250.00	$2,000.00	$251.86	$2,014.88	$625.00	$5,000.00	$300.00	$2,400.00	$250.00	$2,000.00	$250.00	$2,000.00	$350.00	$2,800.00	$350.00	$2,800.00	$425.00	$3,400.00
2502.541	6" PERF TP PIPE DRAIN (MOD)	L F	475	$20.00	$9,500.00	$14.75	$7,006.25	$14.00	$6,650.00	$14.10	$6,697.50	$5.30	$2,517.50	$13.20	$6,270.00	$14.00	$6,650.00	$14.00	$6,650.00	$20.00	$9,500.00	$12.50	$5,937.50	$15.10	$7,172.50
2503.511	18" CP PIPE SEWER	L F	224	$24.00	$5,376.00	$23.25	$5,208.00	$22.00	$4,928.00	$22.16	$4,963.84	$35.00	$7,840.00	$31.00	$6,944.00	$22.00	$4,928.00	$22.00	$4,928.00	$38.00	$8,512.00	$40.00	$8,960.00	$30.00	$6,720.00
2503.602	18" CP WATERTIGHT TEE FITTING	EACH	1	$1,000.00	$1,000.00	$370.00	$370.00	$350.00	$350.00	$352.60	$352.60	$1,100.00	$1,100.00	$950.00	$950.00	$350.00	$350.00	$350.00	$350.00	$500.00	$500.00	$800.00	$800.00	$415.00	$415.00
2504.602	ADJUST GATE VALVE & BOX	EACH	6	$300.00	$1,800.00	$160.00	$960.00	$750.00	$4,500.00	$247.32	$1,483.92	$250.00	$1,500.00	$225.00	$1,350.00	$250.00	$1,500.00	$250.00	$1,500.00	$200.00	$1,200.00	$200.00	$1,200.00	$315.00	$1,890.00
2506.502	CONST DRAINAGE STRUCTURE DESIGN F	EACH	1	$1,850.00	$1,850.00	$2,250.00	$2,250.00	$2,150.00	$2,150.00	$2,166.00	$2,166.00	$4,000.00	$4,000.00	$2,532.00	$2,532.00	$2,150.00	$2,150.00	$2,150.00	$2,150.00	$1,900.00	$1,900.00	$2,200.00	$2,200.00	$3,450.00	$3,450.00
2506.502	CONST DRAINAGE STRUCTURE DESIGN H	EACH	1	$1,800.00	$1,800.00	$1,850.00	$1,850.00	$1,750.00	$1,750.00	$1,763.02	$1,763.02	$1,800.00	$1,800.00	$1,850.00	$1,850.00	$1,750.00	$1,750.00	$1,750.00	$1,750.00	$1,500.00	$1,500.00	$1,600.00	$1,600.00	$2,700.00	$2,700.00
2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN SD	EACH	1	$1,650.00	$1,650.00	$2,150.00	$2,150.00	$2,050.00	$2,050.00	$2,065.25	$2,065.25	$1,900.00	$1,900.00	$2,700.00	$2,700.00	$2,050.00	$2,050.00	$2,050.00	$2,050.00	$1,900.00	$1,900.00	$1,800.00	$1,800.00	$1,600.00	$1,600.00
2511.501	RANDOM RIPRAP CLASS II	C Y	303	$55.00	$16,665.00	$65.00	$19,695.00	$60.00	$18,180.00	$60.45	$18,316.35	$60.00	$18,180.00	$80.00	$24,240.00	$60.00	$18,180.00	$60.00	$18,180.00	$50.00	$15,150.00	$50.00	$15,150.00	$43.75	$13,256.25
2531.501	CONCRETE CURB & GUTTER DESIGN S524	L F	2,647.00	$20.00	$52,940.00	$15.50	$41,028.50	$14.75	$39,043.25	$21.16	$56,010.52	$15.50	$41,028.50	$16.65	$44,072.55	$20.00	$52,940.00	$14.75	$39,043.25	$14.75	$39,043.25	$14.75	$39,043.25	$17.65	$46,719.55
2554.501	TRAFFIC BARRIER DESIGN SPECIAL	L F	100	$70.00	$7,000.00	$75.00	$7,500.00	$71.75	$7,175.00	$72.28	$7,228.00	$75.00	$7,500.00	$75.00	$7,500.00	$75.00	$7,500.00	$71.75	$7,175.00	$72.00	$7,200.00	$71.75	$7,175.00	$87.00	$8,700.00
2554.501	TRAFFIC BARRIER DESIGN B838	L F	2,425.00	$20.00	$48,500.00	$18.00	$43,650.00	$16.90	$40,982.50	$17.03	$41,297.75	$17.75	$43,043.75	$18.50	$44,862.50	$17.00	$41,225.00	$16.90	$40,982.50	$17.00	$41,225.00	$16.90	$40,982.50	$20.50	$49,712.50
2554.523	END TREATMENT-ENERGY ABSORBING TERMINAL	EACH	10	$2,200.00	$22,000.00	$2,150.00	$21,500.00	$2,021.00	$20,210.00	$2,036.04	$20,360.40	$2,200.00	$22,000.00	$2,500.00	$25,000.00	$2,021.00	$20,210.00	$2,021.00	$20,210.00	$2,000.00	$20,000.00	$2,021.00	$20,210.00	$2,450.00	$24,500.00
2563.601	TRAFFIC CONTROL	LS	0.43	$10,000.00	$4,300.00	$6,850.00	$2,945.50	$6,500.00	$2,795.00	$8,563.23	$3,682.19	$15,000.00	$6,450.00	$15,400.00	$6,622.00	$15,000.00	$6,450.00	$10,400.00	$4,472.00	$6,500.00	$2,795.00	$27,000.00	$11,610.00	$19,250.00	$8,277.50
2573.502	SILT FENCE, TYPE PA	L F	33,365.00	$2.00	$66,730.00	$2.25	$75,071.25	$2.15	$71,734.75	$1.91	$63,727.15	$1.75	$58,388.75	$2.20	$73,403.00	$1.90	$63,393.50	$2.15	$71,734.75	$2.15	$71,734.75	$2.15	$71,734.75	$2.65	$88,417.25
2573.504	SANDBAG BARRIER	S F	300	$8.00	$2,400.00	$10.00	$3,000.00	$4.00	$1,200.00	$1.00	$300.00	$4.25	$1,275.00	$25.00	$7,500.00	$20.00	$6,000.00	$5.00	$1,500.00	$5.50	$1,650.00	$19.00	$5,700.00	$4.00	$1,200.00
2573.505	FLOTATION SILT CURTAIN TYPE MOVING WATER	L F	740	$15.00	$11,100.00	$23.50	$17,390.00	$22.50	$16,650.00	$17.08	$12,639.20	$19.00	$14,060.00	$23.50	$17,390.00	$20.00	$14,800.00	$22.50	$16,650.00	$23.00	$17,020.00	$22.50	$16,650.00	$28.00	$20,720.00
2573.53	STORM DRAIN INLET PROTECTION	EACH	3	$120.00	$360.00	$275.00	$825.00	$250.00	$750.00	$196.45	$589.35	$290.00	$870.00	$250.00	$750.00	$200.00	$600.00	$150.00	$450.00	$225.00	$675.00	$125.00	$375.00	$245.00	$735.00
2573.533	SEDIMENT CONTROL LOG TYPE STRAW	L F	544	$3.00	$1,632.00	$3.25	$1,768.00	$3.05	$1,659.20	$5.04	$2,741.76	$3.95	$2,148.80	$3.25	$1,768.00	$5.00	$2,720.00	$3.05	$1,659.20	$3.00	$1,632.00	$3.05	$1,659.20	$3.80	$2,067.20
2573.602	ROCK DITCH CHECK	EACH	26	$500.00	$13,000.00	$525.00	$13,650.00	$500.00	$13,000.00	$503.72	$13,096.72	$390.00	$10,140.00	$1,150.00	$29,900.00	$500.00	$13,000.00	$500.00	$13,000.00	$595.00	$2,470.00	$200.00	$5,200.00	$900.00	$23,400.00
2573.61	SEDIMENT REMOVAL	HOUR	12	$75.00	$900.00	$185.00	$2,220.00	$175.00	$2,100.00	$176.30	$2,115.60	$180.00	$2,160.00	$275.00	$3,300.00	$175.00	$2,100.00	$175.00	$2,100.00	$180.00	$2,160.00	$225.00	$2,700.00	$325.00	$3,900.00
2574.508	FERTILIZER TYPE 3	LB	19,320.00	$0.65	$12,558.00	$0.80	$15,456.00	$0.76	$14,683.20	$0.59	$11,398.80	$0.58	$11,205.60	$0.82	$15,842.40	$1.00	$19,320.00	$0.76	$14,683.20	$0.80	$15,456.00	$0.76	$14,683.20	$0.95	$18,354.00
2575.501	SEEDING (P)	ACRE	55.2	$100.00	$5,520.00	$80.00	$4,416.00	$75.00	$4,140.00	$302.23	$16,683.10	$105.00	$5,796.00	$77.50	$4,278.00	$300.00	$16,560.00	$75.00	$4,140.00	$75.00	$4,140.00	$75.00	$4,140.00	$93.00	$5,133.60
2575.502	SEED MIXTURE 25-141	LB	3,257.00	$3.50	$11,399.50	$3.90	$12,702.30	$3.68	$11,985.76	$3.53	$11,497.21	$3.70	$12,050.90	$3.79	$12,344.03	$3.50	$11,399.50	$3.68	$11,985.76	$3.70	$12,050.90	$3.68	$11,985.76	$4.50	$14,656.50
2575.511	MULCH MATERIAL TYPE 1	TON	111	$200.00	$22,200.00	$275.00	$30,525.00	$255.00	$28,305.00	$151.00	$16,761.00	$263.00	$29,193.00	$260.00	$28,860.00	$150.00	$16,650.00	$255.00	$28,305.00	$255.00	$28,305.00	$255.00	$28,305.00	$315.00	$34,965.00
2575.519	DISK ANCHORING	ACRE	55.2	$75.00	$4,140.00	$80.00	$4,416.00	$75.00	$4,140.00	$196.00	$10,819.20	$368.00	$20,313.60	$77.50	$4,278.00	$195.00	$10,764.00	$75.00	$4,140.00	$75.00	$4,140.00	$75.00	$4,140.00	$93.00	$5,133.60
2575.523	EROSION CONTROL BLANKETS CATEGORY 3	S Y	14,081.00	$1.50	$21,121.50	$1.20	$16,897.20	$1.11	$15,629.91	$1.26	$17,742.06	$1.94	$27,317.14	$1.15	$16,193.15	$1.25	$17,601.25	$1.11	$15,629.91	$1.10	$15,489.10	$1.11	$15,629.91	$1.40	$19,713.40
2575.57	RAPID STABILIZATION METHOD 2	ACRE	38.6	$1,500.00	$57,900.00	$800.00	$30,880.00	$789.00	$30,455.40	$705.21	$27,221.11	$470.00	$18,142.00	$795.00	$30,687.00	$700.00	$27,020.00	$789.00	$30,455.40	$800.00	$30,880.00	$789.00	$30,455.40	$975.00	$37,635.00
			Total for SP 001-610-022		**$1,932,038.75**		**$2,448,102.90**		**$2,355,314.53**		**$2,399,796.07**		**$2,725,890.13**		**$2,450,865.03**		**$2,427,818.85**		**$2,489,793.51**		**$2,747,088.05**		**$2,921,054.97**		**$3,073,703.20**
			Total for Contract 20142		**$4,474,826.25**		**$4,797,893.90**		**$4,978,697.28**		**$4,999,318.90**		**$5,117,863.36**		**$5,122,827.98**		**$5,245,440.15**		**$5,455,768.11**		**$5,471,352.15**		**$5,499,003.47**		**$5,694,554.55**

Board of County Commissioners Agenda Request

3B
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Bridge No. 01504 - CSAH 15 over Cedar Brook

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: John Welle	**Department:** Highway Department
Presenter (Name and Title): John Welle, Aitkin County Engineer	**Estimated Time Needed:** 10 minutes

Summary of Issue:

This bridge is planned for replacement in 2016. This agenda item includes 1) obtaining Board concurrence on the replacement structure type, and 2) obtaining authorization to enter into a design engineering services agreement.

The existing bridge is a 105-foot long timber bridge structure. Since this structure is larger than what is needed to accommodate the volume of water in Cedar Brook, the proposed structure is a smaller 3-sided precast concrete box structure that will sit on an engineered footing. This type of structure is being recommended over a typical bridge structure because of reduced cost, reduced construction time (and corresponding detour duration), and because it more easily "fits" into the restricted area between a horizontal curve and a township road approach.

Design proposals were requested from Erickson Engineering and Widseth, Smith, Nolting with the following quoted amounts:

Erickson Engineering: $22,800, not to exceed
Widseth, Smith, Nolting: $23,329, lump sum

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

1) Concurrence on proposed structure type
2) Authorization by motion to enter into agreement with Erickson Engineering;

Financial Impact:

Is there a cost associated with this request? ☑ *Yes* ☐ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☑ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

Board of County Commissioners Agenda Request

3C
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Approve Right of Way Plat No. 19

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: John Welle	**Department:** Highway
Presenter (Name and Title): John Welle, Aitkin County Engineer	**Estimated Time Needed:** 10 minutes

Summary of Issue:
Right of Way Plat No. 19 has been developed for the acquisition of right of way on a 6-mile segment of CSAH 3 (old TH 232). Right of way offers for 68 parcels of right of way will be sent to 53 property owners upon approval of this Plat.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:
Approval by motion of Right of Way Plat No. 19.

Financial Impact:
Is there a cost associated with this request? ☐ *Yes* ☑ *No*
What is the total cost, with tax and shipping? $
Is this budgeted? ☐ *Yes* ☑ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

Aitkin County

Board of County Commissioners Agenda Request

4A
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Personnel Committee Recommendations

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☑ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
	*provide copy of hearing notice that was published	

Submitted by: Bobbie Danielson

Department: Human Resources

Presenter (Name and Title): Bobbie Danielson, HR Director

Estimated Time Needed: 5 or 10 minutes

Summary of Issue:

Please see attached memo.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

Accept the Personnel Committee's recommendations as presented.

Financial Impact:

Is there a cost associated with this request? ☑ *Yes* ☐ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

AITKIN COUNTY HUMAN RESOURCES

Bobbie Danielson, HR Director
bobbie.danielson@co.aitkin.mn.us
Nicole Visnovec, HR Specialist
nicole.visnovec@co.aitkin.mn.us

Phone 218-927-7306
Job Hotline 218-927-7393
Fax 218-927-7374
www.co.aitkin.mn.us

To: Aitkin County Commissioners
Nate Burkett, County Administrator

From: Bobbie Danielson, HR Director Bobbie Jo Danielson

Date: September 3, 2014

Subject: Personnel Committee Recommendations

Recommendations

The Personnel Committee met on August 26, 2014, and recommends the following:

1. Fill one full-time Public Health Nurse position in the HHS Department. Mona Peterson previously held a part-time PHN position and her last day was August 20, 2014. Grade L, 2014 salary range $40,456 to $72,280, full-time equivalent, scale attached for reference. This is a FLSA exempt, salaried position. Additional information is attached from Tom Burke, HHS Director, along with a copy of the job description. The Personnel Committee recommends approval as Mr. Burke indicates this will be budget neutral due to capturing greater revenues through billing health plans and billing case management through SSIS.

2. Promote 3 existing Certified Appraisers (Grade 4) to the Senior Certified Appraiser (Grade 5) level, effective January 1, 2015. The Personnel Committee recommends approval. Additional information from Mike Dangers, County Assessor, is attached, along with copies of both job descriptions. The Certified Appraiser (Grade 4) job classification level will be retained and used for new hires with less than 5 years of full-time assessment experience. The estimated budget increase from projected 2015 at Grade 4 to Grade 5 is $4,814.19 and that includes the additional salaries, PERA, Fica, and Medicare. (Estimates only as the 2015 AFSCME Courthouse contract is not yet settled.)

Action Requested

Motion to accept the Personnel Committee's recommendations as presented.

Aitkin County Health & Human Services

204 First St. NW
AITKIN, MINNESOTA 56431
PHONE 1-800-328-3744 or 1-218-927-7200 - FAX # 927-7210

DATE: August 21, 201

TO: Personnel Committee

Nate Burkett, County Administrator

FROM: Tom Burke, Director

SUBJECT: Full Time Public Health Nurse Position

ACH&HS is requesting that we move the half time PHN position to full time. We believe this will be budget neutral due to capturing greater revenues. By moving this position to full time we believe we will see the following benefits in service delivery:

* additional PHN time in the community based services area that will make it easier to have a multi-disciplinary approach to our case work which is mandated for us to have and cover MnChoices.
* enhanced opportunities for home visiting which we have seen make a positive impact in assisting families early avoiding high end crisis work.
* additional time to assist in coverage for flu shots and/or other vaccinations.
* further work capacity to help manage our emergency preparedness planning and coverage.
* an option to back up WIC if need be.

We believe this increase in capacity allows us to be more flexible in our coverage which allows for a more responsive impact to our consumers. We also believe this will allow us the capacity to be proactive versus reactive. We have been successful in this way of doing business in other areas of our work for the benefit of the consumer, the tax payer and the county as a whole.

I would ask for the personnel committee's support in this request.

PUBLIC HEALTH NURSE SALARY CHART W/BENEFITS

2014 2014 Wage Scale	Start Minimum	0.6 +6 months Step 1	1 +6 months Step 2	2 +1 year Step 3	3 +1 year Step 4	4 +1 year Step 5	6 +2 years Step 6
Class L	$19.45	$20.34	$21.27	$22.24	$23.24	$24.29	$25.42
FICA	$1.49	$1.56	$1.63	$1.70	$1.78	$1.86	$1.94
PERA	$1.41	$1.47	$1.54	$1.61	$1.68	$1.76	$1.84
Health/Life Single	$4.30	$4.30	$4.30	$4.30	$4.30	$4.30	$4.30
Total Hourly	**$26.65**	**$27.67**	**$28.74**	**$29.85**	**$31.00**	**$32.21**	**$33.51**
Total Salary	**$55,427.94**	**$57,554.97**	**$59,777.60**	**$62,095.82**	**$64,485.74**	**$66,995.16**	**$69,695.77**

*** Based on Step Scale – not S&P

2014 2014 Wage Scale	Start	Middle	End
Class L	$19.45	$25.42	$34.75
FICA	$1.49	$1.94	$2.66
PERA	$1.41	$1.84	$2.52
Health/Life Single	$4.30	$4.30	$4.30
Total Hourly	$26.65	$33.51	$44.23
Total Salary	**$55,427.94**	**$69.695.77**	**$91,993.72**

*** Based on S&P Scale

Compensation Guidelines 1/1/2014 – 12/31/2014

APPENDIX A

SALARY SCHEDULE

Employees covered by these compensation guidelines shall receive an annual salary as approved by the Aitkin County Board of Commissioners. This schedule is based on a forty (40) hour workweek. (FLSA non-exempt employees are paid on an hourly equivalent basis and are eligible for overtime compensation.)

Effective 1/1/2014 through 12/31/2014

Grade	Minimum	Midpoint	Maximum
G	$ 68,931.20	$ 96,262.40	$ 123,593.60
H	$ 64,584.00	$ 90,168.00	$ 115,752.00
I	$ 57,345.60	$ 80,007.20	$ 102,668.80
J	$ 50,190.40	$ 69,950.40	$ 89,710.40
K	$ 44,636.80	$ 62,171.20	$ 79,705.60
L	$ 40,456.00	$ 56,368.00	$ 72,280.00
M	$ 36,691.20	$ 51,053.60	$ 65,416.00
N	$ 33,612.80	$ 46,716.80	$ 59,820.80
O	$ 31,054.40	$ 43,139.20	$ 55,224.00
P	$ 28,683.20	$ 39,790.40	$ 50,897.60
Q	$ 26,956.80	$ 37,440.00	$ 47,923.20
R	$ 25,833.60	$ 35,807.20	$ 45,780.80
S	$ 24,585.60	$ 34,091.20	$ 43,596.80
T	$ 23,504.00	$ 32,583.20	$ 41,662.40
U	$ 22,526.40	$ 31,220.80	$ 39,915.20
V	$ 21,673.60	$ 29,993.60	$ 38,313.60
W	$ 21,132.80	$ 29,265.60	$ 37,398.40

PHN

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est. 2015 $52,624 Full-time

PUBLIC HEALTH NURSE

Department Health and Human Services Department, Public Health Division
Grade Grade 10
Reports to Public Health Nursing Supervisor
FLSA Status Exempt
Union Status Non-union

Final Appointing Authority
This position shall not be filled until final approval of the County Administrator. All offers of employment are made in writing by the Human Resources Department.

Job Summary
To perform professional public health nursing services to ensure proper administration and coordination of established public health programs. To prevent disease and promote health and wellness to individuals, families, groups and all citizens of Aitkin County.

Supervision Received
Employees working in this job class work under general supervision and usually receive some instruction with respect to details of most assignments, but are free to develop their own work sequences within established procedures, methods, and policies. They are often physically removed from their supervisor and are only subject to periodic supervisory checks.

Supervision Exercised
No formal supervisory authority.

Essential Functions
This position description is not intended to be all-inclusive. Employee may perform other essential and nonessential functions as assigned or apparent to meet the ongoing needs of the department and organization. Regular attendance and punctuality are essential requirements of this position.

1. Researches, assesses and makes recommendations concerning a diverse population of clients and families in a variety of settings by conducting health assessments in client homes and at public health clinics. Utilizes comprehensive assessment techniques to include a review of physical, functional, mental and socioeconomic status; family dynamics, roles and support systems; and educational needs. Interprets health screening findings to the client and or/family. Makes or assists with referrals to local health providers and community agencies.
2. Performs ongoing evaluation of client and family status and meets public health nursing care needs of a selected case load. Provides comprehensive case management and coordinates services provided through a multidisciplinary approach collaborating extensively with multiple community agencies.

3. Provides public health education in the community. Meets with physicians, school personnel, Health & Human Services personnel and other interested parties to promote optimum health practices and develops health education classes and programs throughout the county for various community groups and public health programs.
4. Reviews documentation in charts to ensure compliance with federal, state and contracted provider rules and regulations for the specific program area. Initiates, maintains and updates various records and prepares reports of work activities, communicable diseases and other subjects for physicians and department, grant and program administrators at a county and/or state level.
5. Investigates and monitors reports of communicable diseases and undertakes disease prevention and control activities in accordance with public health policies, including adult and child immunization clinics. Coordinates efforts with physicians, school personnel and others regarding spread and treatment of the disease.
6. Participates with other members of the community in assessing, planning, implementing and evaluating health services including the promotion of a broad continuum of primary, secondary and tertiary prevention of illness. Represents the department on various advisory committees and at community activities throughout the county to determine community needs and assist with goal implementation and activities related to the promotion of health and the prevention of disease.
7. Ensures that clinical documentation and department billing, such as vouchering, invoicing and time recording, is timely, accurately completed, kept secure and confidential and maintained consistent with Public Health policies and procedures.
8. Pursues professional growth experiences, opportunities and trainings.
9. Participates in the development, planning, reassessing, implementation and evaluation of an emergency preparedness plan for the county. May be required to report for specialized assigned duties or perform emergency response roles.
10. Attends training and meetings as needed.
11. Performs other related duties as assigned or apparent.

Minimum Qualifications

Bachelor's degree from an accredited school of Nursing, Registered Nurse License and Public Health Nurse Certificate, both issued by the Minnesota Board of Nursing, and CPR Certification.

Valid Minnesota driver's license required. U.S. Citizenship required. Employment reference checks and a criminal background check will be performed as part of the pre-employment process.

Knowledge, Skills, and Abilities Required

Knowledge of:

1. Knowledge of County and departmental policies, procedures, and practices.
2. Public health nursing and case management practices.
3. Current medical trends and evidence based nursing practice.
4. Emergency procedures.
5. Family and group dynamics.
6. Community resources and referral processes.

7. Federal, state, county and contracted provider health-related laws and regulations of various program areas.
8. The role of Health & Human Services workers in the population served.
9. The Public Health Division's mission, policies and procedures.
10. Legal responsibility for the standards of practice in the area of public health nursing.
11. The third-party payer system.

Skill in:
1. Communication and interpersonal skills as applied to interaction with supervisors, coworkers, and the general public sufficient to exchange or convey information and to receive work direction.
2. Computer and typing skill sufficient to complete 30 net words per minute without errors.
3. Reading, writing, and speaking English proficiently.
4. Organizing and prioritizing work.
5. Use and operation of a variety of medical and laboratory tools and equipment.
6. Operating modern office equipment.
7. Operating a motor vehicle safely.
8. Weighing and measuring adults and children accurately.

Ability to:
1. Present a positive attitude in the workplace, promote a spirit of teamwork and cooperation, and be able to treat co-workers, supervisor, and subordinates with respect, honesty, and consideration.
2. Maintain confidentiality.
3. Communicate effectively, both verbally and in writing with clients, families, physicians and other professionals and coworkers.
4. Implement plans of care, evaluate and revise the plans on an ongoing basis.
5. Make independent decisions in altering plans of care to fit individual situations.
6. Advocate for and make care plan recommendations to clients, families and professionals based on the client's and/or family's needs and characteristics.
7. Establish and maintain effective and supportive public relations sufficient to interpret and convey information, policies and legal requirements to inquiring individuals and organizations.
8. Integrate knowledge of public policy and resource management into program development.
9. Determine applicant eligibility based on demographics & health status.

Language Skills
Very High Skills – Ability to read, analyze, and interpret common scientific and technical journals, financial reports, and legal documents. Ability to respond to common inquiries or complaints from customers, regulatory agencies, or members of the business community. Ability to write speeches and articles for publication that conform to prescribed style and format. Ability to effectively present information to top management, public groups, and/or governing boards.

Mathematical Skills
Ability to add, subtract, multiply, and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to compute rate, ratio, and percent and to draw and interpret bar graphs.

Reasoning Skills
High Skills – Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

Computer Skills
To perform this job successfully, an individual should be proficient at using the following software.

County Payroll Software E-time, Microsoft Word, Excel, Outlook, Publisher, PowerPoint, Public Health Activity Tracking (PHAT), SSIS, MMIS, HuBERT, MIIC, FAP, and Internet.

Ability to Travel
Frequent travel is required to client home visits, public health clinics, trainings, and meetings throughout the county, region and state.

Competencies
To perform the job successfully, an individual should consistently demonstrate the following competencies (definitions attached or available upon request):

Ethics, attendance/punctuality, safety and security, dependability, analytical, design, problem solving, project management, technical skills, customer service, interpersonal skills, oral communication, written communication, teamwork, change management, leadership, quality management, business acumen, cost consciousness, diversity, organizational support, judgment, motivation, planning/organizing, professionalism, quality, quantity, adaptability, initiative, innovation, flexibility, and crisis management.

Work Environment
The noise level in the work environment is usually moderate.

While traveling and making home visits, may be exposed to a variety of situations including deteriorating housing, aggressive and/or threatening clients, unrestrained and/or aggressive animals and pets, infection and chronic disease exposure, and inadequate and/or poorly maintained roadways / driveways.

Equipment and Tools
Computer, copier, fax, telephone, printer, 10-key calculator, lab and clinical equipment, county-owned vehicles, and personal vehicle (requires proof of insurance on file).

Physical Activities/Requirements
Climbing, balancing, stooping, kneeling, crouching, reaching, standing, walking, pushing, pulling, lifting, carrying, use of fingers, grasping, talking, hearing, seeing, and repetitive motions. Must have the ability to lift and/or carry up to 50 pounds.

While performing the duties of this job, the employee performs medium work, exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

Working safely is a condition of employment. Aitkin County is a drug-free workplace.

Disclaimer
The above statements are intended to describe the general nature and level of the work being performed by employees assigned to this job classification. This is not an exhaustive list of all duties and responsibilities. Aitkin County reserves the right to amend and change responsibilities to meet organizational needs as necessary. This job description does not constitute an employment agreement between the employer and employee.

Reasonable Accommodation Notice
The County is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the County will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer.

05/13/2014

OFFICE OF
AITKIN COUNTY ASSESSOR
209 2nd ST N.W. Room 111
AITKIN, MINNESOTA 56431
Phone: 218/927-7327 – Fax: 218/927-7379
assessor@co.aitkin.mn.us

MEMO

August 18, 2014

To: Nathan Burkett, County Administrator

From: Mike Dangers, County Assessor

Re: Restructuring of Appraiser Positions

For several years, the Appraisers and the Senior Appraisers in the County Assessor's Office have done primarily the same tasks on a daily basis. The individuals holding these positions each have many years of experience as appraisers for Aitkin County.

The proposal I would like you to consider would be to make all existing Appraiser positions Senior Appraiser positions and grade 5 on the Aitkin County Job Classification List. The Appraiser position would become the entry level position where a new hire would likely be placed. After 5 years of assessment experience has been obtained by an employee, the Appraiser would move to the Senior Appraiser position.

I personally have experience in a system similar to this in Pine County where I was a Junior Appraiser at one time before I was licensed. Once I had met the requirements for licensure and experience, I was able to move up to the Appraiser position in that county, which also involved a grade increase.

Another reason for this change is due to the increased levels of education and licensure that property assessment personnel need to obtain under current law. We anticipate having a more difficult time filling open appraiser positions with Accredited Minnesota Assessor licensed staff. A requirement of the Senior Appraiser position would mirror the current licensing law that these appraisers must be Accredited Minnesota Assessor licensed by July 2019.

In the past, persons who didn't have a basic assessors CMA license could typically obtain it in one year. Now someone without a license would need a minimum of three years assessment experience to obtain an AMA license plus several additional educational requirements would need to be met.

This grade change would not cause an immediate change to the staffing expenditures. The three Appraisers that would change to Senior Appraiser are all well below the top of the hourly pay range for both grade 4 and grade 5. Due to this fact, I request that this change happen as soon as possible.

Please contact me with any questions.

Aitkin County
Est. May 23, 1857

Position Description

CERTIFIED APPRAISER

Department Assessor's Office
Grade Grade 4
Reports to County Assessor and Assistant County Assessor
FLSA Status Non-exempt
Union Status AFSCME Courthouse Unit

Final Appointing Authority
This position shall not be filled until final approval of the County Administrator. All offers of employment are made in writing by the Human Resources Department.

Job Summary
To appraise and classify all real property for property tax purposes so that assessments and valuations are applied fairly and equitably to the properties and structures within Aitkin County.

Supervision Received
Employees working in this job class work under general supervision and usually receive some instruction with respect to details of most assignments, but are free to develop their own work sequences within established procedures, methods, and policies. They are often physically removed from their supervisor and are only subject to periodic supervisory checks.

Supervision Exercised
No formal supervisory authority.

Essential Functions
This position description is not intended to be all-inclusive. Employee may perform other essential and nonessential functions as assigned or apparent to meet the ongoing needs of the department and organization. Regular attendance and punctuality are essential requirements of this position.

1. Estimates values, classifies property, and enters data into CAMA for all areas of the County utilizing knowledge and procedures of established assessment standards.
2. Establishes and maintains effective working relationships with taxpayers, coworkers, county officials, state agencies and the general public. Effectively answers questions from the general public.
3. Attends Board of Reviews, Township and County Meetings with the County Assessor and defends valuations and makes adjustments.
4. Reads and interprets blue prints, aerial photos, topographical and GIS maps as they relate to appraising property.
5. Attends continuing education classes as required by State law to maintain licensure.
6. Utilizes information from other county, city, state, and federal offices to assist the public or other offices in data collection.

7. Compiles reports as required by law (Department of Revenue) by itemizing and tabulating all real estate and personal property valuations and verifying sales and conducting sales ratio studies under the direction of the County Assessor.
8. Analyzes and interprets tax laws under the direction of the County Assessor.
9. Attends seminars, workshops, and region assessor meetings as needed.
10. Performs other related duties as assigned or apparent.

Minimum Qualifications — w/Board approval, update to include: after 5 years FT assessment exp. to Senior level.
Certified Minnesota Assessor (CMA) license issued by the Minnesota State Board of Assessors, plus one or more years (12 full months) of assessment experience.

Valid Minnesota driver's license required. U.S. Citizenship required. Employment reference checks and a criminal background check will be performed as part of the pre-employment process.

Must continue to meet all qualifications set forth by the Minnesota State Board of Assessors.

CMA licensing requirements check-off list can be viewed on the Minnesota Department of Revenue website. www.revenue.state.mn.us An assessor's license indicates one of four levels of licensure as approved by the Board of Assessors for an individual that has met certain requirements regarding assessment education and experience. The four levels of licensure are: 1. Certified Minnesota Assessor (CMA); 2. Certified Minnesota Assessor Specialist (CMAS); 3. Accredited Minnesota Assessor (AMA); 4. Senior Accredited Minnesota Assessor (SAMA).

Knowledge, Skills, and Abilities Required

Knowledge of:
1. County and departmental policies, procedures, and practices.
2. Knowledge and understanding of assessment processes and laws (State & local statutes) as they relate to residential, seasonal, agricultural and vacant land and tax exempt properties.
3. Appraisal principles and practices.
4. All types of building construction.
5. Cost and sales approach to valuation.
6. Mass appraisal concepts and procedures.
7. Basic zoning and shoreland ordinances and how it may affect valuation and classification.
8. Local and Regional real estate market trends as it relates to market value.
9. Property tax laws to ensure correct application for valuation and classification and also determining a properties qualification for special programs.

Skill in:
1. Communication and interpersonal skills as applied to interaction with coworkers, supervisor, and the general public sufficient to exchange or convey information and to receive work direction.
2. Researching and understanding legal descriptions including an understanding of survey and legal document terminology.
3. Typing skill sufficient to complete 30 net words per minute without errors.

4. Preparing and making presentations to groups.
5. Reading, writing, and speaking English proficiently.
6. Effectively organizing and prioritizing work.
7. Good conflict management skills, decision making skills, negotiating skills, and time management skills.
8. Detailed inspection of properties to collect data regarding measurements, building features, improvements or deterioration, neighborhood and land characteristics, and photos.

Ability to:

1. Present a positive attitude in the workplace, promote a spirit of teamwork and cooperation, and be able to treat all county staff and the general public with respect, honesty, and consideration.
2. Work independently and make decisions quickly and accurately.
3. Read and analyze various assessment related reports such as sales ratio studies.
4. Work alone and navigate in remote areas of the county by vehicle and on foot. Must have the ability to walk or snowshoe through deep snow.
5. Communicate well with fellow staff and the public utilizing written and oral communication skills.
6. Read and interpret county ordinances, GIS maps, Blue Prints, aerial photos, topographical maps and other specialized documents relating to appraising property.
7. Use office equipment such as a financial calculator, copier, fax machine, and phone. Must have the on-going ability to adapt to and use new technology and software programs proficiently.
8. Demonstrate a high degree of self-motivation and the ability to work independently.
9. Accurately enter large amounts of data under limited time frames.
10. Accurately sketch and maintain pictorial documentation - downloading, labeling, attachment to file.
11. Drive safely through all weather conditions and different types of terrain.
12. Ability to work with mathematical concepts; to apply concepts such as fractions, percentages, ratios, and proportions to practical solutions.

Language Skills
High Skills – Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

Mathematical Skills
High Skills – Ability to work with mathematical concepts such as mean, median, coefficient of dispersion, price related differential, and calculation of area and volume of a variety of shapes. Ability to apply concepts such as fractions, percentages, ratios, and proportions to practical situations.

Reasoning Skills
High Skills – Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

Computer Skills
To perform this job successfully, an individual should be proficient at using the following software:

Apple iOS for iPad or similar, County Payroll Software/E-time, geographic information system, Microsoft Word, Excel, Outlook, Minnesota Counties Information Systems (MCIS) property tax and Computer Aided Mass Appraisal (CAMA) systems, and Apex digital sketching software.

Ability to Travel
Travel is generally required on a daily basis, in all types of weather, for assessment of county parcels. It is also required for trainings and meetings in and out of Aitkin County on an occasional basis.

Code of Conduct and Ethics
Licensed Minnesota assessors are required to abide by the ethical and professional guidelines established in the Code of Conduct and Ethics developed by the Commissioner of Revenue. The purpose of this code of conduct and ethics is to instill public confidence in property assessment and promote fairness and uniformity of assessment practices. As a counterpart to this code of conduct and ethics, there is also an ethics seminar required for all licensed assessors to be completed once in every four year period starting July 1, 2004.

Competencies
To perform the job successfully, an individual should consistently demonstrate the following competencies (definitions attached or available upon request):

Ethics, attendance/punctuality, safety and security, dependability, analytical, problem solving, technical skills, customer service, interpersonal skills, oral communication, written communication, teamwork, leadership, quality management, cost consciousness, diversity, organizational support, judgment, motivation, planning/organizing, professionalism, quality, quantity, adaptability, and initiative.

Work Environment
The noise level in the work environment is usually moderate and can on occasion be loud, such as during appeal meetings with several people talking in a room with poor acoustics.

A wide variety of conditions are possible when doing physical property inspections. This includes the potential of encountering dangerous dogs and possible meth lab locations. Work is performed year round, including in summer heat and winter cold extremes.

When in the field, viewing properties, employees walk while carrying their equipment (clipboard or iPad, camera, tape measure, etc.). Oftentimes they are alone in remote areas. Sometimes the walk is short (up a driveway) and other times it can be long (2+ miles one way). Going over, under or around obstacles, such as trees, fences, and gates is common. Appraisers encounter people (friendly and not so friendly) and pets, deer, bear, wolves, snakes, flies, spiders, ticks and mosquitoes, poison ivy, etc.

Equipment and Tools
Computer, copier, fax, telephone, cell phone, handheld computer and remote access equipment, printer, 10-key calculator, measuring tape, camera, financial calculator, shredder, emergency weather-alert system, county-owned vehicles, and personal vehicle (requires proof of insurance on file).

Physical Activities/Requirements
Climbing, daily balancing, daily stooping, kneeling, crouching, reaching, standing, walking, daily pushing, pulling, daily lifting, carrying, occasional feeling (texture of building materials), use of fingers, grasping, talking, hearing, seeing, and repetitive motions. Must have the ability to lift and/or carry up to 25 pounds.

While performing the duties of this job, the employee performs light work, exerting up to 25 pounds of force occasionally, and/or up to 10 pounds of force frequently, and/or a negligible amount of force constantly to move objects. If the use of arm and/or leg controls requires exertion of forces greater than that for Sedentary Work and the worker sits most of the time, the job is rated for Light Work.

Working safely is a condition of employment. Aitkin County is a drug-free workplace.

Disclaimer
The above statements are intended to describe the general nature and level of the work being performed by employees assigned to this job classification. This is not an exhaustive list of all duties and responsibilities. Aitkin County reserves the right to amend and change responsibilities to meet organizational needs as necessary. This job description does not constitute an employment agreement between the employer and employee.

Reasonable Accommodation Notice
The County is an Equal Opportunity Employer. In compliance with the Americans with Disabilities Act, the County will provide reasonable accommodations to qualified individuals with disabilities and encourages both prospective and current employees to discuss potential accommodations with the employer.

05/13/2014

Aitkin County

Est. May 23, 1857

Position Description

CERTIFIED APPRAISER, SENIOR

Department Assessor's Office
Grade Grade 5
Reports to County Assessor and Assistant County Assessor
FLSA Status Non-exempt
Union Status AFSCME Courthouse Unit

Final Appointing Authority
This position shall not be filled until final approval of the County Administrator. All offers of employment are made in writing by the Human Resources Department.

Job Summary
To estimate values and determine classification of properties for real and personal property taxation. To process and verify sales that occur in the county and to aid in proposing new valuation rates countywide.

Supervision Received
Employees working in this job class work under general supervision and usually receive some instruction with respect to details of most assignments, but are free to develop their own work sequences within established procedures, methods, and policies. They are often physically removed from their supervisor and are only subject to periodic supervisory checks.

Supervision Exercised
No formal supervisory authority.

Essential Functions
This position description is not intended to be all-inclusive. Employee may perform other essential and nonessential functions as assigned or apparent to meet the ongoing needs of the department and organization. Regular attendance and punctuality are essential requirements of this position.

1. Estimates valuation and determines classification of properties in assigned jurisdictions for property taxation, utilizing knowledge of assessment standards and procedures.
2. Analyzes sales and verifies the validity of sales to qualify for inclusion in sales ratio studies. Assists in proposing new land and building values for upcoming assessments.
3. Assists in the training of other and new appraisers under the supervision of the County Assessor. This includes assisting other appraisers and/or the department as a whole with special projects and issues.
4. Responds to inquiries or issues presented by property owners, the general public, coworkers, and other government officials.
5. Researches, understands and applies changes in property tax law and procedures including navigating the Department of Revenue website and Minnesota Statues.
6. Attends Boards of Appeal and Equalization and defends field work, explains or reviews valuations and classifications, and makes adjustments when necessary.

7. Attends seminars, workshops, and region assessor meetings as needed.
8. Performs other related duties as assigned or apparent.

Minimum Qualifications
Certified Minnesota Assessor (CMA) license issued by the Minnesota State Board of Assessors, plus three or more years of assessment experience.

Valid Minnesota driver's license required. U.S. Citizenship required. Employment reference checks and a criminal background check will be performed as part of the pre-employment process.

Must continue to meet all qualifications set forth by the Minnesota State Board of Assessors.

CMA licensing requirements check-off list can be viewed on the Minnesota Department of Revenue website. www.revenue.state.mn.us An assessor's license indicates one of four levels of licensure as approved by the Board of Assessors for an individual that has met certain requirements regarding assessment education and experience. The four levels of licensure are: 1. Certified Minnesota Assessor (CMA); 2. Certified Minnesota Assessor Specialist (CMAS); 3. Accredited Minnesota Assessor (AMA); 4. Senior Accredited Minnesota Assessor (SAMA).

Knowledge, Skills, and Abilities Required

Knowledge of:
1. County and departmental policies, procedures, and practices.
2. Federal, State, and local laws, rules, and regulations relevant to the work performed in this position.
3. Cost and sales approach to valuation.
4. Mass appraisal concepts and procedures.
5. Basic zoning and shoreland ordinances and how it may affect valuation and classification.
6. Local and Regional real estate market trends.
7. Property tax laws to ensure correct application for valuation and classification and also determining a properties qualification for special programs.

Skill in:
1. Communication and interpersonal skills as applied to interaction with coworkers, supervisor, and the general public sufficient to exchange or convey information and to receive work direction.
2. Researching and understanding legal descriptions including an understanding of survey and legal document terminology.
3. Typing skill sufficient to complete 30 net words per minute without errors.
4. Preparing and making presentations to groups.
5. Reading, writing, and speaking English proficiently.
6. Effectively organizing and prioritizing work.
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6. Read and interpret county ordinances, GIS maps, Blue Prints, aerial photos, topographical maps and other specialized documents relating to appraising property.
7. Use office equipment such as a financial calculator, copier, fax machine, and phone. Must have the on-going ability to adapt to and use new technology and software programs proficiently.
8. Demonstrate a high degree of self-motivation and the ability to work independently.
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Equipment and Tools
Computer, copier, fax, telephone, cell phone, handheld computer and remote access equipment, printer, 10-key calculator, measuring tape, camera, financial calculator, shredder, emergency weather-alert system, county-owned vehicles, and personal vehicle (requires proof of insurance on file).

Physical Activities/Requirements
Climbing, daily balancing, daily stooping, kneeling, crouching, reaching, standing, walking, daily pushing, pulling, daily lifting, carrying, occasional feeling (texture of building materials), use of fingers,

grasping, talking, hearing, seeing, and repetitive motions. Must have the ability to lift and/or carry up to 25 pounds.

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05/13/2014

AFSCME Courthouse Unit Agreement, excerpt:

ARTICLE 5 **MANAGEMENT RIGHTS**

Section A. The Employer retains the full, unrestricted right to operate and manage all manpower, facilities and equipment; to establish functions and programs; to set and amend budgets; to determine the utilization of technology; to establish and modify organizational structure; to select, direct and determine the number of personnel; to establish work schedules, and to perform any inherent managerial functions not specifically limited by this Agreement.

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Section B. Any term or condition of employment not specifically established or modified by this Agreement shall remain solely within the discretion of the Employer to modify, establish or eliminate.

Section C. An employee who is promoted to a higher paid classification would be placed on the "six month" step or the step that results in at least a $0.25 per hour increase, whichever is greater. Thereafter, the employee would receive step increases on their classification anniversary date.

An employee who posts for a job at a lower classification pay rate or who exercises seniority preference into a lower classification would move to the lower classification at the same longevity step as their previous position.

An employee whose job classification is upgraded will be placed on the step in the new pay range that results in at least a $0.75 per hour increase.

2015 Est. as Grade 4's $204,366.00
OR as Grade 5's $209,180.19
$4814.19

Aitkin County

Board of County Commissioners Agenda Request

5A

Agenda Item #

Requested Meeting Date:

Title of Item:

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☐ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☑ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: Kirk Peysar	**Department:** Auditor
Presenter (Name and Title): Kirk Peysar, County Auditor	**Estimated Time Needed:** 5 mins

Summary of Issue:

set unorganized township cemetery levies for 2015.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

recommend to changes to the unorganized township cemetery levies.

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☑ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☑ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

CERTIFIED COPY OF RESOLUTION OF COUNTY BOARD OF AITKIN COUNTY, MINNESOTA

ADOPTED September 9, 2014

By Commissioner: xx **090914-0xx**

2015 Unorganized Cemetery

BE IT RESOLVED, that the following sums of money be levied against the tax capacity of the Unorganized Townships of Aitkin County, for the year collectible 2015 for Cemetery (Revenue):

Unorganized Township Cemetery:

Shovel Lake Cemetery	
51-27	$600
52-27	$600
Hebron Cemetery	
50-25	$1,500

Commissioner xx moved the adoption of the resolution and it was declared adopted upon the following vote

FIVE MEMBERS PRESENT All Members Voted Yes

STATE OF MINNESOTA)
County of Aitkin) ss.
Office of County Auditor,)

I, Kirk Peysar, Auditor, of the County of Aitkin, do hereby certify that I have compared the foregoing with the original resolution filed in my office on the 9th day of September A.D., 2014, and that the same is a true and correct copy of the whole thereof.

WITNESS MY HAND AND SEAL OF OFFICE at Aitkin, Minnesota, this 9th day of September A.D. 2014

KIRK PEYSAR, County Auditor
BY _____, Deputy

Aitkin County

Board of County Commissioners Agenda Request

5B
Agenda Item #

Requested Meeting Date:

Title of Item:

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☐ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☑ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: Kirk Peysar	**Department:** Auditor
Presenter (Name and Title): Kirk Peysar, County Auditor	**Estimated Time Needed:** 5 mins

Summary of Issue:

set unorganized township road and bridge levies for 2015.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

recommend no changes to the unorganized township road and bridge levies.

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☑ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☑ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

CERTIFIED COPY OF RESOLUTION OF COUNTY BOARD OF AITKIN COUNTY, MINNESOTA

ADOPTED September 9, 2014

By Commissioner: xx **090914-0xx**

2015 Unorganized Road & Bridge

BE IT RESOLVED, that the following sums of money be levied against the tax capacity of the Unorganized Townships of Aitkin County, for the year collectible 2015 for Road and Bridge purposes:

Unorg Township	
52-22	$3000
45-24	$2000
47-24	$7500
52-24	$1500
50-25	$4000
51-25	$0
52-25	$4000
50-26	$2000
48-27	$4500
49-27	$9000
50-27	$0
51-26	$0
52-27	$3500

Commissioner xx moved the adoption of the resolution and it was declared adopted upon the following vote

FIVE MEMBERS PRESENT All Members Voted Yes

STATE OF MINNESOTA)
County of Aitkin) ss.
Office of County Auditor,)

I, Kirk Peysar, Auditor, of the County of Aitkin, do hereby certify that I have compared the foregoing with the original resolution filed in my office on the 9th day of September A.D., 2014, and that the same is a true and correct copy of the whole thereof.

WITNESS MY HAND AND SEAL OF OFFICE at Aitkin, Minnesota, this 9th day of September A.D. 2014

KIRK PEYSAR, County Auditor
BY _____, Deputy

Unorganized Township Road & Bridge Fund August 21, 2014

Township	2013 Expense	2014 Levy	Current Balance	Proposed 2015
52-22	$15,011.21	$3,000	$50,027.86	$3,000
45-24	$4,174.58	$2,000	$37,990.71	$2,000
47-24	$13,412.77	$7,500	$8,139.22	$7,500
52-24	$7,742.16	$1,500	$65,430.62	$1,500
50-25	$6,219.75	$4,000	$37,889.74	$4,000
51-25	$117.50	$0	$41,825.20	$0
52-25	$44,166.99	$4,000	$9,480.51	$4,000
50-26	$4,432.44	$2,000	$38,460.85	$2,000
48-27	$8,012.71	$4,500	$23,361.30	$4,500
49-27	$8,748.73	$9,000	$29,658.38	$9,000
50-27	$456.25	$0	$66,226.01	$0
51-27	$793.03	$0	$41,184.94	$0
52-27	$15,731.99	$3,500	$30,636.06	$3,500
Totals:	$129,020.11	$41,000	$480,311.40	$41,000

Aitkin County

Board of County Commissioners Agenda Request

5c
Agenda Item #

Requested Meeting Date:

Title of Item:

☑ REGULAR AGENDA ☐ CONSENT AGENDA ☐ INFORMATION ONLY	**Action Requested:** ☐ Approve/Deny Motion ☑ Adopt Resolution (attach draft)	☐ Direction Requested ☐ Discussion Item ☐ Hold Public Hearing* **provide copy of hearing notice that was published*
Submitted by: Kirk Peysar		**Department:** Auditor
Presenter (Name and Title): Kirk Peysar, County Auditor		**Estimated Time Needed:** 5 mins

Summary of Issue:

set unorganized township fire protection levies for 2015.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

recommend necessary changes to the unorganized township fire protection levies to cover contract increases.

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☑ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☑ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

CERTIFIED COPY OF RESOLUTION OF COUNTY BOARD OF AITKIN COUNTY, MINNESOTA

ADOPTED September 9, 2014

By Commissioner: xx **090914-0xx**

2015 Unorganized Fire Protection

BE IT RESOLVED, that the following sums of money be levied against the tax capacity of the Unorganized Townships of Aitkin County, for the year collectible 2015 for Fire Protection purposes:

Unorg Township	
52-22	$7500
51-22	$150
45-24	$500
47-24	$1750
52-24	$1500
50-25	$1600
51-25	$200
52-25	$2250
50-26	$1500
48-27	$3000
49-27	$5500
50-27	$300
51-27	$1000
52-27	$2700

Commissioner xx moved the adoption of the resolution and it was declared adopted upon the following vote

FIVE MEMBERS PRESENT All Members Voted Yes

STATE OF MINNESOTA)
County of Aitkin) ss.
Office of County Auditor,)

I, Kirk Peysar, Auditor, of the County of Aitkin, do hereby certify that I have compared the foregoing with the original resolution filed in my office on the 9th day of September A.D., 2014, and that the same is a true and correct copy of the whole thereof.

WITNESS MY HAND AND SEAL OF OFFICE at Aitkin, Minnesota, this 9th day of September A.D. 2014

KIRK PEYSAR, County Auditor
BY _____, Deputy

Unorganized Township Levies-Fire Fund August 21, 2014

Served By	Township	2014 Prop Levy	Current Balance	2014 Expense	2015 Prop Levy	2015 Budget
Jacobson	52-22	$5,000	$12,142.08	$8,452.75	$7,500	$8,452.75
Jacobson	51-22	$125	$546.07	$143.77	$150	$143.77
McGrath	45-24	$450	$382.09	$434.19	$500	$434.19
McGregor	47-24	$1,500	$1,293.27	$1,194.92	$1,750	$1,483.16
Jacobson	52-24	$1,500	$1,808.12	$1,345.21	$1,500	$1,400.81
Palisade	50-25	$1,600	$1,203.59	$1,463.00	$1,600	$1,350.00
Palisade	51-25	$200	$626.59	$228.00	$200	$205.00
Hill City	52-25	$2,500	$2,112.91	$2,295.22	$2,250	$1,858.03
Palisade	50-26	$1,500	$1,105.66	$1,391.00	$1,500	$1,277.00
Aitkin	48-27	$2,400	$766.20	$2,084.00	$3,000	$2,473.00
Palisade	49-27	$4,750	$2,751.24	$4,318.00	$5,500	$4,596.00
Palisade	50-27	$275	$409.36	$275.00	$300	$251.00
Hill City	51-27	$1,000	$1,977.52	$959.38	$1,000	$965.45
Hill City	52-27	$2,300	$2,511.39	$2,234.50	$2,700	$2,440.94
	Total:	$25,100	$29,636.09	$26,818.94	$29,450	$27,331.10

Aitkin County

Board of County Commissioners Agenda Request

5D

Agenda Item #

Requested Meeting Date:

Title of Item:

☑ REGULAR AGENDA	**Action Requested:**	☐ Direction Requested
☐ CONSENT AGENDA	☐ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☑ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: Kirk Peysar	**Department:** Auditor
Presenter (Name and Title): Kirk Peysar, John Welle, Jim Ratz	**Estimated Time Needed:**

Summary of Issue:

A public hearing for the Partial Abandonment of a Drainage System (County Ditch 24) located in Sections 7, 8, and 18 of Spencer Township T47N, R26W) and Sections 12 and 13 of Aitkin Township (T47N, R27W).

EverStar, LLC submits this petition pursuant to Minnesota Statute 103E.806.

See attachments

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☐ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

NOTICE OF PUBLIC HEARING

AITKIN COUNTY BOARD OF COMMISSIONERS

Partial Ditch Abandonment of a Drainage System
Involving County Ditch 24
(Pursuant to Minnesota Statute 103E.806)

Notice is hereby given that on Tuesday, September 9, 2014 , at 10:00a.m., the Aitkin County Board of Commissioners will hold a public hearing at the county board room, county courthouse in the City of Aitkin, Minnesota, for the purpose of considering partial abandonment of drainage systems, in the County of Aitkin, Minnesota.

A copy of the petition for partial abandonment of a drainage system is available for public review at the Office of the County Auditor, Aitkin County Courthouse, 209 Second Street Northwest, Aitkin, Minnesota. Or by calling 218-927-7354.

BY ORDER OF THE COUNTY BOARD.

Dated at Aitkin, Minnesota, this 12th day of August, 2014.

Kirk Peysar
County Auditor

STATE OF MINNESOTA

AITKIN COUNTY BOARD OF COMMISSIONERS
DRAINAGE AUTHORITY FOR AITKIN COUNTY DITCH 24

Regarding the Petition of EverStar, LLC, for the Impoundment and Diversion of Drainage System Waters on Aitkin County Ditch 24 (Statutes Section 103E.227) and alternative Petition for Partial Abandonment of Drainage System (Statutes Section 103E.806)	**Petition for Impoundment and Diversion and Alternative Petition for Partial Abandonment**

For its petition to impound and divert waters on Aitkin County Ditch (CD) 24, or, in the alternative, for its petition to partially abandon CD 24, EverStar, LLC states and alleges the following:

Part 1: General Statement of Facts and Conditions:

1. EverStar, LLC is the owner of property in portions of Sections 7, 8 and 18 of Spencer Township (T47N, R26W) and Sections 12 and 13 of Aitkin Township (T47N, R27W) all in Aitkin County, Minnesota.

2. EverStar's property is within the benefitted area of CD 24 and is subject to assessment for the maintenance of CD 24.

3. A branch of CD 24 traverses a portion of EverStar's property flowing west from the northeast corner of Section 18 and following the north line of section 18 for approximately ¼ mile then flowing south across section 18 where it enters the main channel of CD 24 which flows west to the Mississippi River. The main channel of CD 24 follows the improved course of Sissabagemah Creek for approximately 1 ¼ miles before entering the Mississippi River. (See Attachment 1).

4. Everstar is proposing a wetland restoration on its property which will be protected by a permanent conservation easement. This will require permanent modification of the public drainage system which has eliminated wetland hydrology by draining the property. The modification will include obstruction of the branch of the drainage system located on EverStar's property in order to block the drainage system waters and divert them into the property to support the wetland restoration. Modification of CD 24 will accompany elimination of private ditches and drainage improvements on the property.
5. The location of the modifications, concept plans for the proposed project, and maps that identify the areas likely to be affected by the project are included in Attachment 2.
6. EverStar owns all property to be affected by the modifications and is funding the modifications as a private project. EverStar does not request any funds from the public drainage system for its project.
7. After construction of its project, water draining from and through EverStar's property will continue to discharge to CD 24. Therefore, EverStar's property will continue to benefit from CD 24 and be subject to assessments for future maintenance of CD 24. EverStar is not seeking removal of its property from the benefitted area of the drainage system.

Part 2a: Petition for Impoundment and Diversion of Drainage System Waters:

8. Minnesota Statutes Section 103E.227 allows any person, public or municipal corporation, governmental subdivision, the state or a department or agency of the state or federal government to petition to impound or divert drainage system waters for beneficial use.

Beneficial uses can include wetland preservation or restoration or creation of water quality improvements or flood control.

9. The project does not impact public waters and neither a public waters work permit nor a water use permit is required from the commissioner of natural resources. EverStar is securing all required local, state and federal permits for its project and evidence of such permits may be made a condition of approval of the action requested by this petition.

10. A bond or similar surety in the amount of $10,000 was offered upon initial filing of this petition as required by statutes section 103E.202; but EverStar was notified by the Drainage Authority that the bond was not required.

11. EverStar understands that is must pay the costs incurred if the proceedings are dismissed.

12. EverStar has performed a technical analysis of the proposed modifications of the drainage system to ensure that the drainage system modification will not impair the utility of the drainage system or deprive affected landowners of its benefit. The technical analysis is found in Attachment 3.

13. EverStar's proposed project will be of a public and private benefit. The public benefits of the project result from the restoration of natural wetland conditions and the elimination of soil and nutrient runoff to the Mississippi River. Additional public benefits result from the creation of wetland mitigation to support development in the region. Private benefits will result from the project because restrictions on the use of the property make the development of wetland mitigation bank the highest and best use of the property.

14. Based on the technical analysis found in Attachment 3, no flowage or other easements are necessary as a result of the modification of the drainage system and all impacts from the modification of the drainage system will be contained on EverStar's property.

15. Granting of the petition to impound or divert drainage system waters will give EverStar authority to permanently modify the drainage system in the manner detailed in Attachment 2. The permanent modification will be reflected in the drainage system record as the only authorized configuration of the drainage system on the property. The permanent modification is not subject to further changes, including restoration of the original alignment or grade of the drainage system, that are inconsistent with plans and specifications for the permanent modification found in Attachment 2.

16. EverStar acknowledges that it is solely responsible for construction, operation, and maintenance of the drainage system modifications and remains subject to the Drainage Authority's jurisdiction and authority to require EverStar to maintain the modification at EverStar's expense.

17. By operation of statute section 103E.227, unless the Drainage Authority determines otherwise, the drainage system will have no financial obligation for the cost of future maintenance of the drainage system modifications.

Part 2b: Alternative Petition for Partial Abandonment of Drainage System:

18. Minnesota Statutes Section 103E.806 allows an owner of benefited property to petition the drainage authority to abandon any part of the drainage system that is not of public

benefit and utility and does not serve a substantial useful purpose to property remaining in the system.

19. The benefitted properties and roads lying upstream of EverStar's property will continue to discharge beneficial drainage onto EverStar's property and EverStar's modification of the drainage system will continue to carry those waters through EverStar's property and return them to a downstream, unmodified portion of the drainage system.

20. EverStar's analysis of the impact of its project indicates that once the project and modifications to the drainage system are constructed, the modified portion of the drainage system will not be of public benefit and will not serve a substantial useful purpose to property remaining in the system.

21. The construction plan for EverStar's wetland restoration provides for the passage of drainage system waters through EverStar's property along the general route of CD 24.

22. EverStar's wetland restoration plan provides for the passage of water in a manner that does not adversely affect adjacent lands or damage any property that otherwise relies on CD 24 as an outlet for drainage.

23. Based on the post-project conditions to be established and maintained by EverStar as part of its wetland restoration, the branch of CD 24 on EverStar's property will no longer be of public benefit and utility or serve a substantial useful purpose to property remaining in the system.

24. Continuing jurisdiction is the only difference in the drainage authority's status after granting a petition to impound and divert drainage system waters under statute section 103E.227 versus granting a petition for partial abandonment under 103E.806. When a

portion of a drainage system is abandoned, the responsibility of the drainage authority for that part of the drainage system ends. When authority is granted to modify a drainage system, the drainage authority retains jurisdiction over the modification and may require the petitioner to maintain modification under the drainage code.

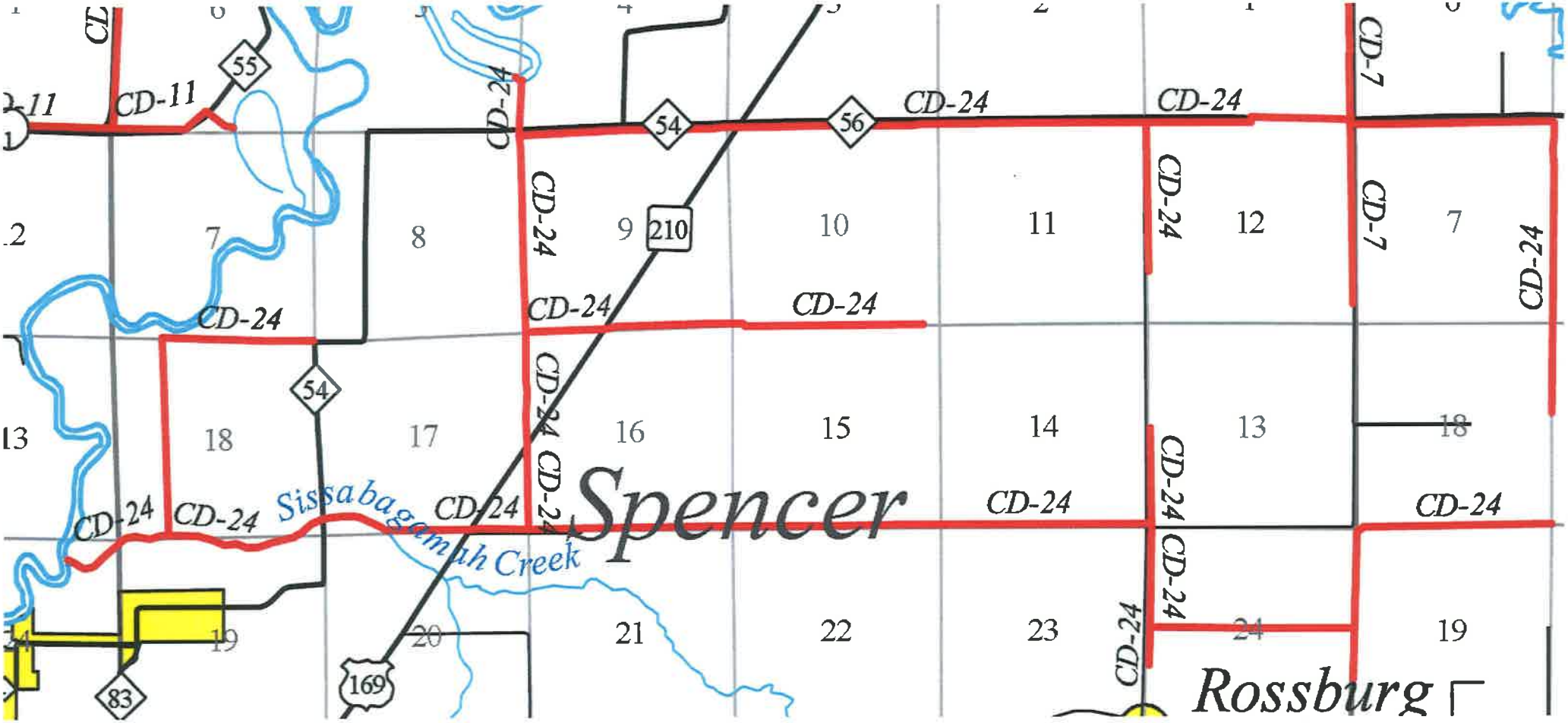
25. Therefore, in the alternative, if the Drainage Authority finds it to be in the public interest, EverStar petitions for partial abandonment of the branch of CD 24 on its property.

Respectfully Submitted,

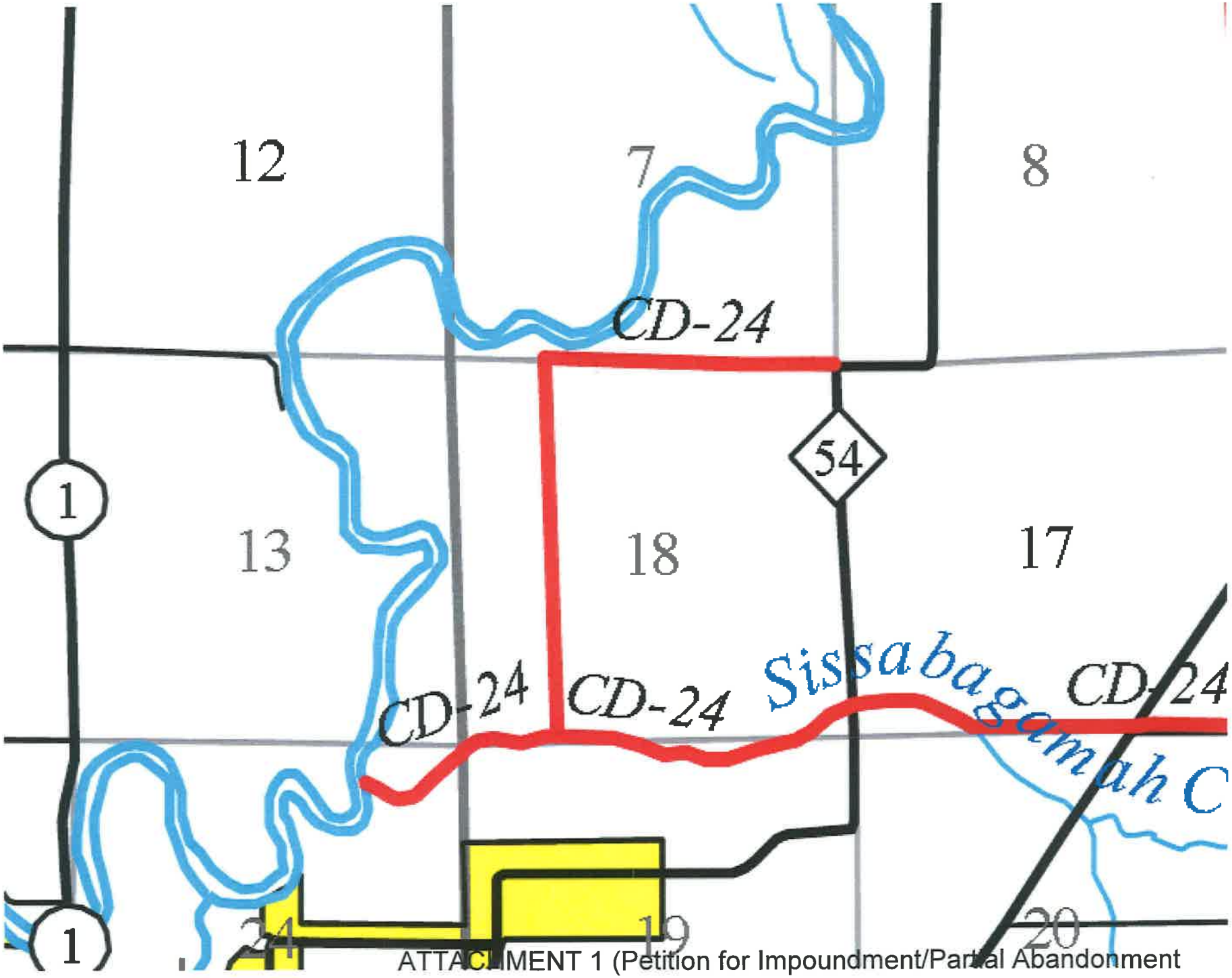
EverStar, LLC

By

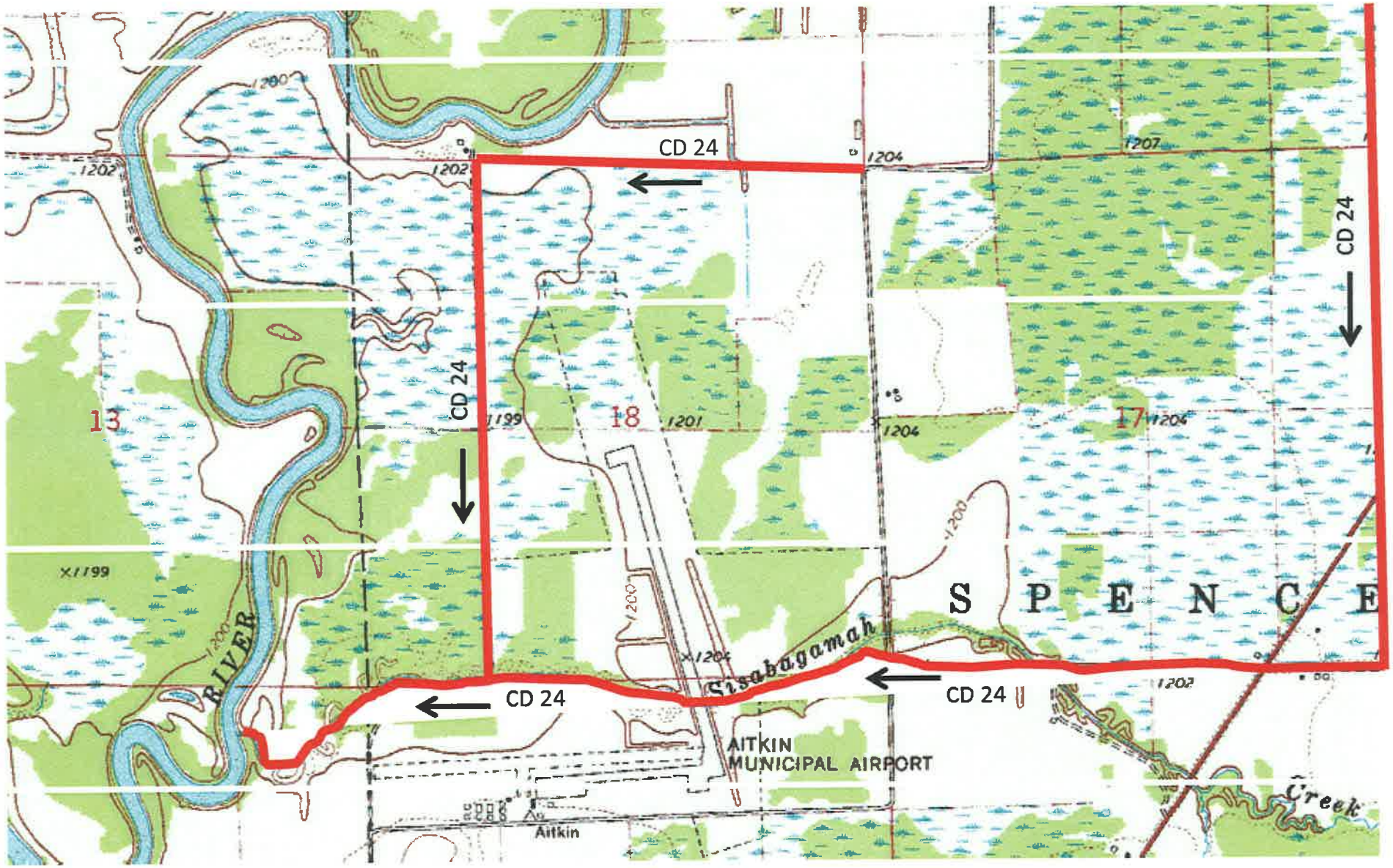
Travis D. Mills, its President
9302 Interlachen Road
Lake Shore, MN 56468



ATTACHMENT 1 (Petition for Impoundment/Partial Abandonment



ATTACHMENT 1 (Petition for Impoundment/Partial Abandonment



ATTACHMENT 1 (Petition for Impoundment/Partial Abandonment

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Construction Plans

for

Grading, Drainage, and Erosion Control

for

EverStar Wetland Bank Project

Aitkin County, Minnesota

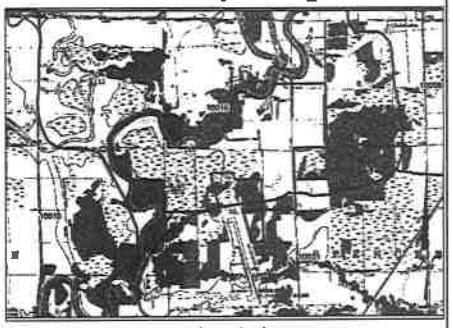
Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468
Contact: Gayle Momchilovich
Phone: 218-963-4515

Prepared by:

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
PHONE 952-937-5150
FAX 952-937-5822
TOLL FREE 1-888-937-5150
www.westwoodps.com
Westwood
Project number: 2004-7566
Contact: Eric J. Hansen

Vicinity Map



(Not to Scale)

Sheet List Table	
Sheet Number	Sheet Title
1	COVER
2	OVERALL WETLAND PLAN
2A	GENERAL DESIGN SUMMARY
3	WETLAND CONSTRUCTION DETAILS
3A	COUNTY DITCH ORIGINATION DETAIL
4	WETLAND PLAN – SHEET A
5	WETLAND PLAN – SHEET B
6	WETLAND PLAN – SHEET C
7	WETLAND PLAN – SHEET D
8	WETLAND PLAN – SHEET E
9	WETLAND PLAN – SHEET F
10	WETLAND PLAN – SHEET G
11	WETLAND PLAN – SHEET H
12	WETLAND PLAN – SHEET I
12A	SUBSURFACE CLAY BARRIER CONSTRUCTION DETAIL
12B	REVEGETATION PLAN

NO.	DATE	REVISION	SHEETS
1	8/2/13	UPDATE PLAN PER HYDROLOGY	ALL
2	9/3/13	SUBSURFACE CLAY BARRIER DETAIL	12
3	11/15/13	PER REGULATORY COMMENTS	ALL

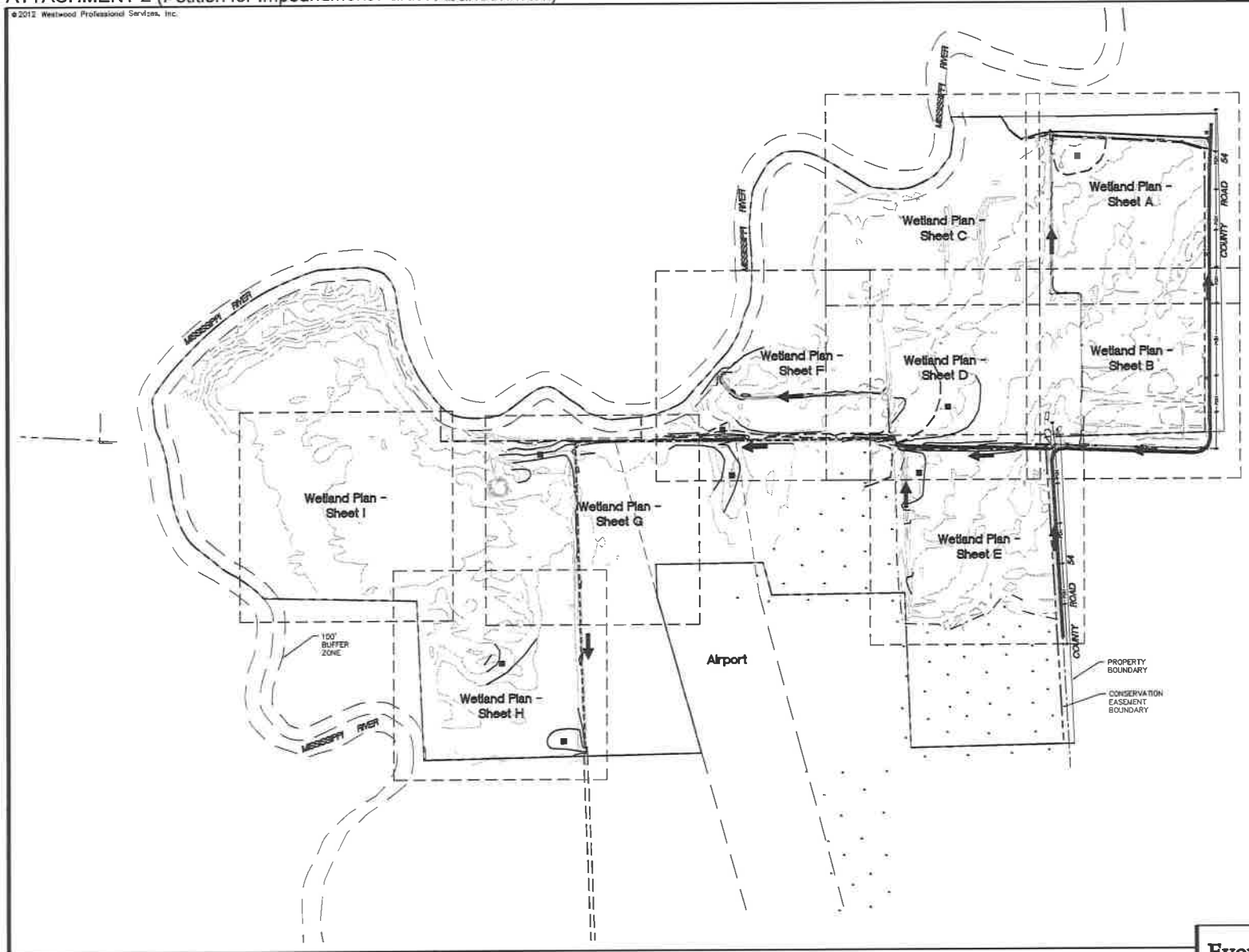
Construction Plans
for
Grading, Drainage, and Erosion Control
for
EverStar Wetland Bank Project
Aitkin County, Minnesota

Date: 03/23/12 Sheet: 1 of 12

2004756&CVF01.dwg

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
GOPHER STATE ONE CALL
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166



LEGEND

- MATERIAL BORROW AREA
- EXISTING DITCH FLOW DIRECTION
- DENOTES COUNTY DITCH

N

0' 400' 800' 1200'

Date 03/23/12 Sheet 2 OF 12

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
PHONE 952-937-5150
FAX 952-937-5822
TOLL FREE 1-888-937-5150

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed PROFESSIONAL ENGINEER under the laws of the State of Minnesota.

Eric J. Hansen
Date 11/15/13 License No. 23658

Revisions
6/5/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed TTS
Checked TTS
Drawn CWG
Record Drawing by/date

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

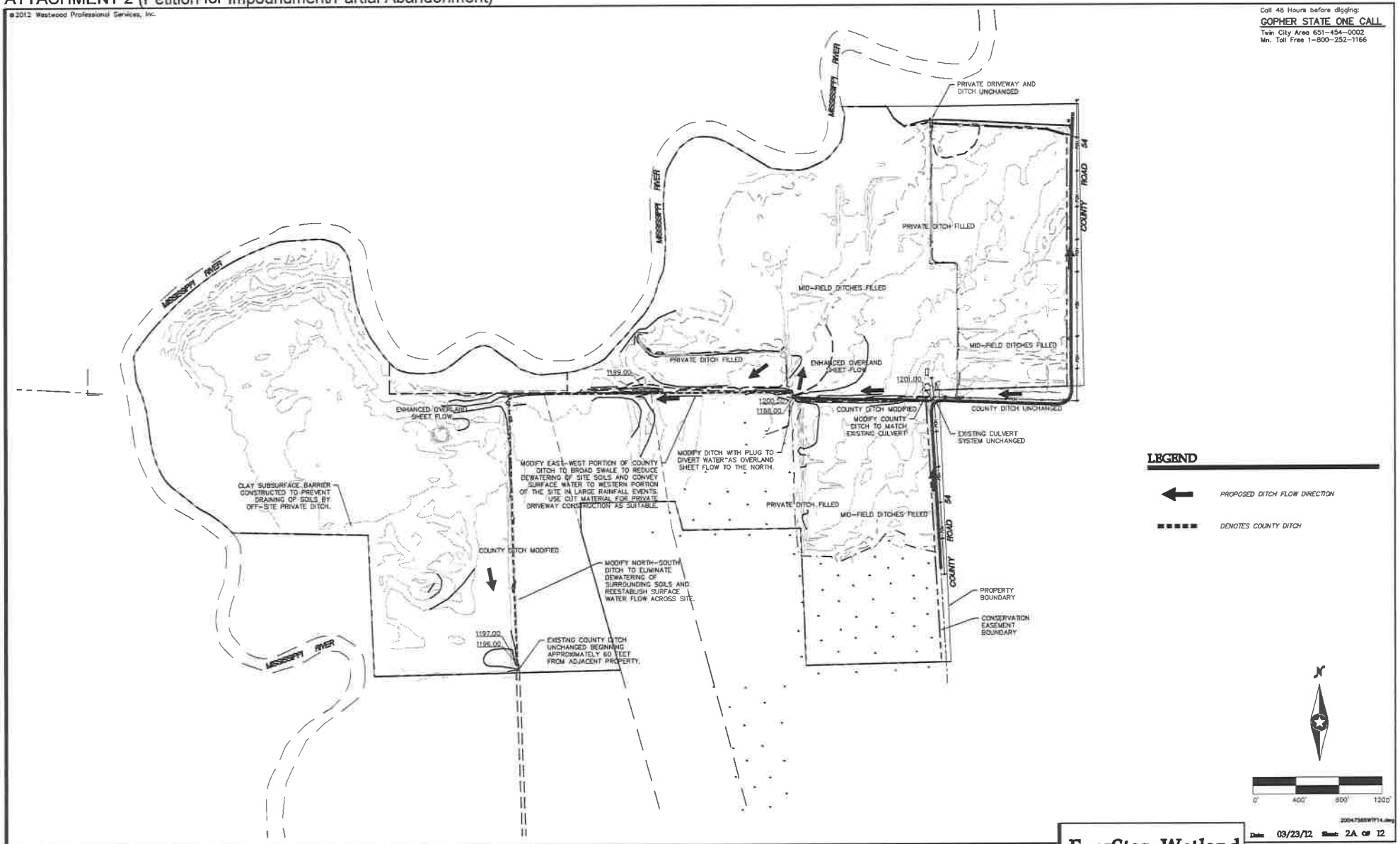
EverStar Wetland Bank Project

Aitkin County, Minnesota

Overall Wetland Plan

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
GOPHER STATE ONE CALL
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166



Date: 03/23/12 Sheet: 2A OF 12

Westwood

Prepared for:

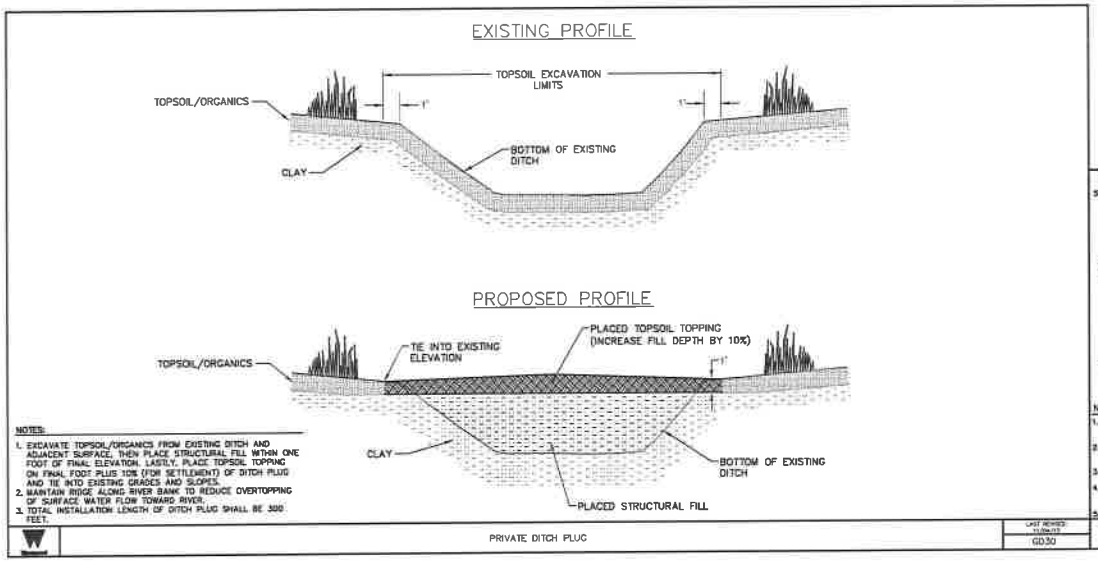
EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project
Aitkin County, Minnesota

General Design Summary

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
GOPHER STATE ONE CALL
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166

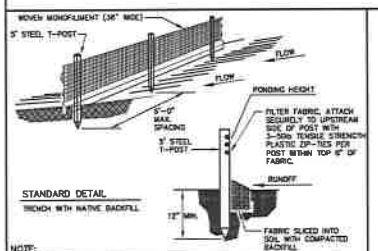


NOTES:
1. EXCAVATE TOPSOIL/ORGANICS FROM EXISTING DITCH AND ADJACENT SURFACE, THEN PLACE STRUCTURAL FILL WITHIN ONE FOOT OF FINAL ELEVATION. LASTLY, PLACE TOPSOIL TOPPING ON FINAL FOOT PLUS 10% (FOR SETTLEMENT) OF DITCH PLUG AND TIE INTO EXISTING GRADES AND SLOPES.
2. MAINTAIN RIDGE ALONG RIVER BANK TO REDUCE OVERTOPPING OF SURFACE WATER FLOW TOWARD RIVER.
3. TOTAL INSTALLATION LENGTH OF DITCH PLUG SHALL BE 300 FEET.

PRIVATE DITCH PLUG — LAST REVISED: 11/04/13 — GD30

MATERIALS & CONSTRUCTION NOTES:

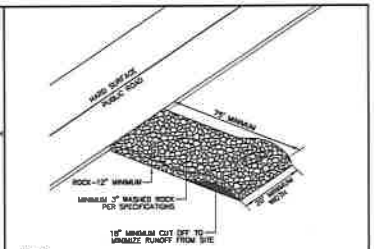
- COMMON FILL MAY BE COMPOSED OF TOPSOIL OR ANY MIXTURE OF CLEAN MINERAL SOIL SUITABLE TO SUPPORT VEGETATIVE GROWTH.
- OVERALL DITCH PROFILE SHOULD BE MAINTAINED IN A LEVEL MANNER TO AVOID PONDING IN AREAS OF FILL.
- STRUCTURAL FILL FOR DITCH PLUGS SHALL BE COMPOSED OF CLAY SOILS CONTAINING LESS THAN 5% ORGANIC MATERIAL.
- FINAL DITCH FILL ELEVATIONS SHALL BE INCREASED BY 10% OF FILL HEIGHT TO ALLOW FOR SETTLEMENT, UNLESS OTHERWISE NOTED.



STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

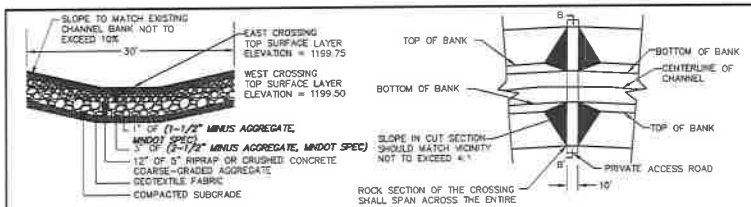
NOTE:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN ACCUMULATED TO 1/3 THE HEIGHT OF THE FABRIC OR MORE.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
4. ALL ENDS OF THE SILT FENCE SHALL BE WRAPPED UPSLOPE SO THE ELEVATION OF THE BOTTOM OF FABRIC IS HIGHER THAN "PONDING HEIGHT".
5. "HEAVY DUTY" IS SAME AS MACHINE SLICED ONLY HAND INSTALLED.

MACHINE SLICED SILT FENCE (HEAVY DUTY) — LAST REVISED: 11/04/13 — GD03



NOTES:
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK TO STOP MUD MIGRATION THROUGH ROCK/WOOD CHIPS.
2. ENTRANCES MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION ON PUBLIC ROADWAYS. FUGITIVE ROCK WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.
3. LENGTH AND WIDTH TO BE ADJUSTED FOR SITE CONDITIONS.

CONSTRUCTION ENTRANCE — LAST REVISED: 11/04/13 — GD05



SECTION B' - B'
PROFILE ALONG CENTERLINE OF ROCK CHANNEL CROSSING
NOT TO SCALE

PLAN VIEW OF ROCK CHANNEL CROSSING
NOT TO SCALE

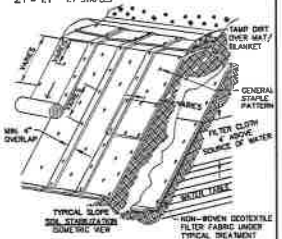
NOTE:
1. CROSSINGS SHALL HAVE THE TOP-MOST SURFACE LAYER A MINIMUM OF 2.5 INCHES BELOW THE STREAM CHANNEL BOTTOM.
2. THE ACCESS ROAD SHALL CROSS THE DITCH AT A 90° ANGLE.
3. THE TOP BED OF THE ROCK CHANNEL CROSSING SHALL CONFORM TO THE EXISTING DITCH CROSS SECTIONAL SLOPES.
4. MATERIAL THICKNESSES MAY BE FIELD ADJUSTED TO ACHIEVE SUFFICIENT BEARING CAPACITIES AS ARE NECESSARY FOR ANTICIPATED ROAD USE.
5. COMPACT SURFACING MATERIAL BY EQUIPMENT TRAVEL.

TEXAS CROSSING — LAST REVISED: 9/09/13 — GD31

CATEGORY OF BLANKET	STAPLE LENGTH
00	5"
0	5"
1	4"
2	4"
3	8"
4	8"
5	8"
6	8"
7	8"

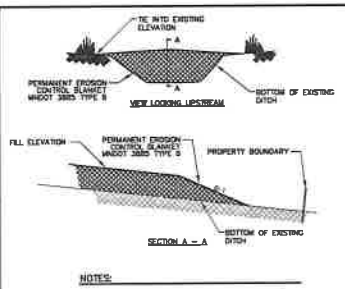
SPACING FOR STAPLES

SLOPE RATIO	STAPLES/YARD
2:1 (or >)	1.2 STAPLES
2:1 - 1:1	1.7 STAPLES



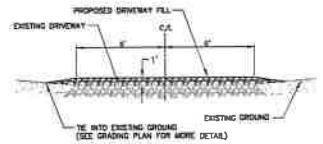
NOTES:
1. MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
2. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICK AND GRASS.
3. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL.
5. DO NOT STRETCH.
6. PERMANENT EROSION BLANKETS SHALL BE MNDOT 3885 TYPE 8.

PERMANENT EROSION BLANKETS
TURF REINFORCEMENT MATS FOR SLOPES — LAST REVISED: 11/13/13 — GD21



NOTES:
1. PERMANENT EROSION CONTROL BLANKET SHALL BE MNDOT 3885 TYPE 8 & INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

INITIAL & END OF DITCH FILL — LAST REVISED: 11/13/12 — GD29



PRIVATE DRIVE EASEMENT CROSS SECTION — LAST REVISED: 11/03/12 — GD32

2004756STL01.DWG

Date 03/23/12 Sheet 3 OF 12

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
PHONE 952-937-5150
FAX 952-937-5822
TOLL FREE 1-888-937-5150
www.westwoodps.com

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed PROFESSIONAL ENGINEER under the laws of the State of Minnesota.
Eric J. Hansen
Date 11/15/13 License No. 23638

Revisions:
6/3/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed: TYB
Checked: TYB
Drawn: CBPJ
Record Drawings by/date:

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

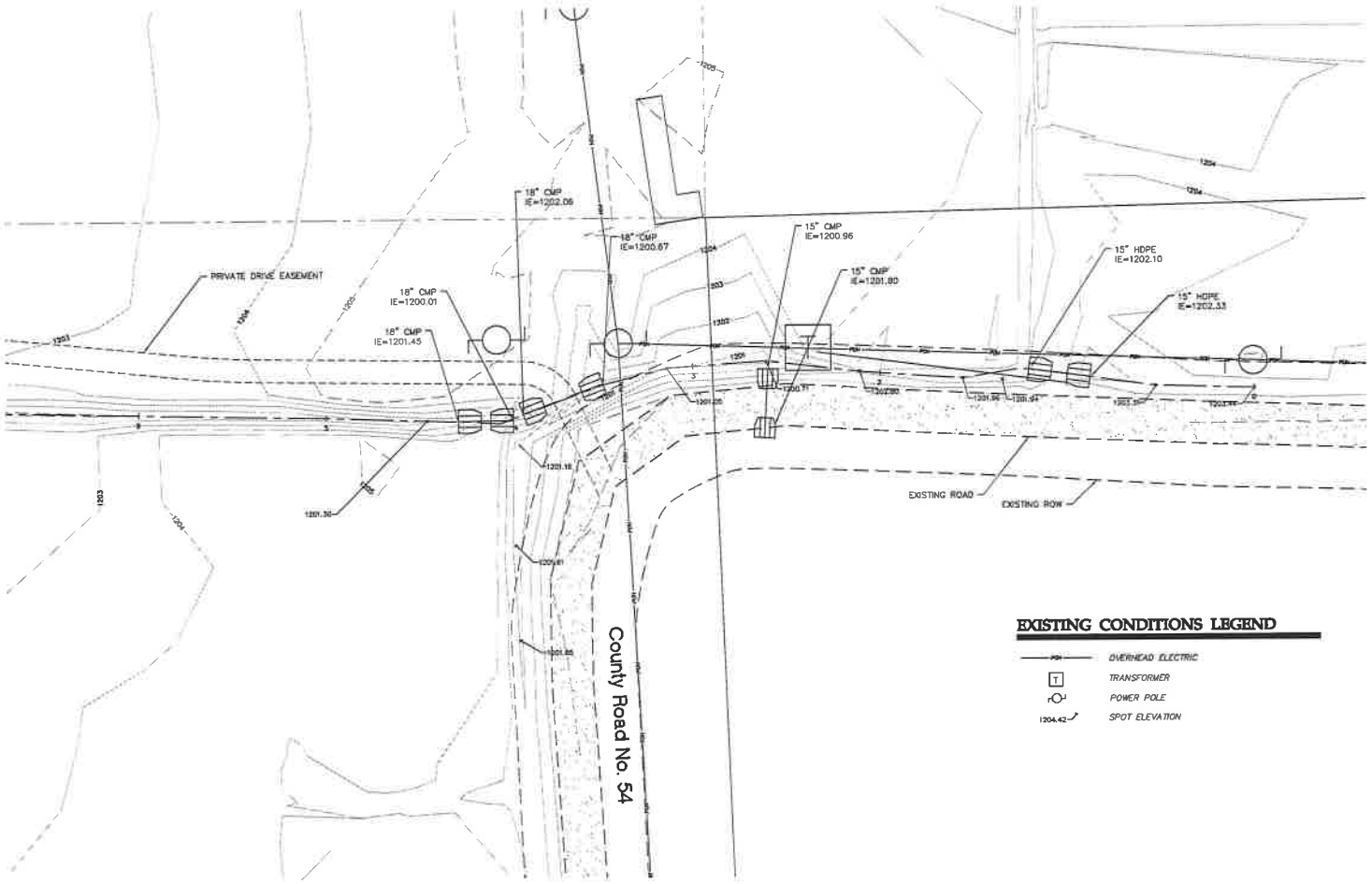
EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Construction Details

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
GOPHER STATE ONE CALL
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166



EXISTING CONDITIONS LEGEND

- OVERHEAD ELECTRIC
- TRANSFORMER
- POWER POLE
- 1204.42 SPOT ELEVATION

0' 30' 60' 90'

Date: 03/23/12 Sheet: 3A OF 12

EverStar Wetland Bank Project

Atkin County, Minnesota

County Ditch Origination Detail

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
PHONE 952-937-5150
FAX 952-937-5822
TOLL FREE 1-888-937-5150

I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly licensed PROFESSIONAL ENGINEER under the laws of the State of Minnesota.

Eric J. Hansen
Date 11/15/13 License No. 23838

Revisions:
8/5/13 – UPDATE PLAN PER HYDROLOGY
11/15/13 – PCR REGULATORY COMMENTS

Designed: EJH
Checked: EJH
Drawn: BH
Record Drawings by/date:

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
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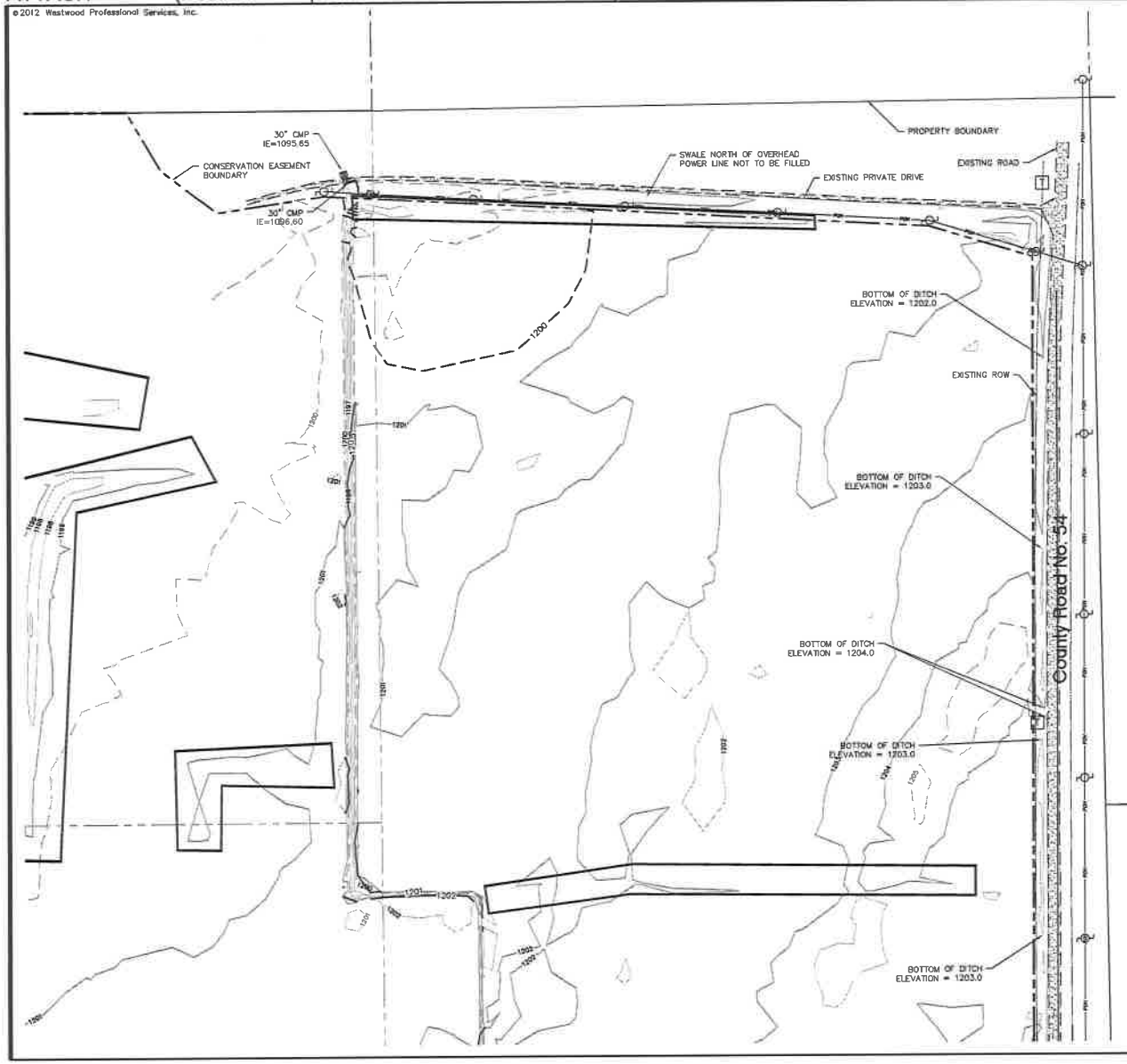

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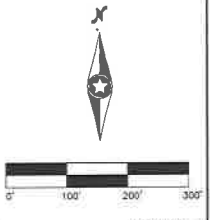
- MID-FIELD DITCH FILL AREA
- OHE — OVERHEAD ELECTRIC
- T — TRANSFORMER
- POWER POLE



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Eric J. Hansen
Date 11/15/13 License No. 23838

Revisions:
2/5/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed: TTR
Checked: TTR
Drawn: CWO
Record Drawings by/date:

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet A

Date: 03/23/12 Sheet: 4 OF 12

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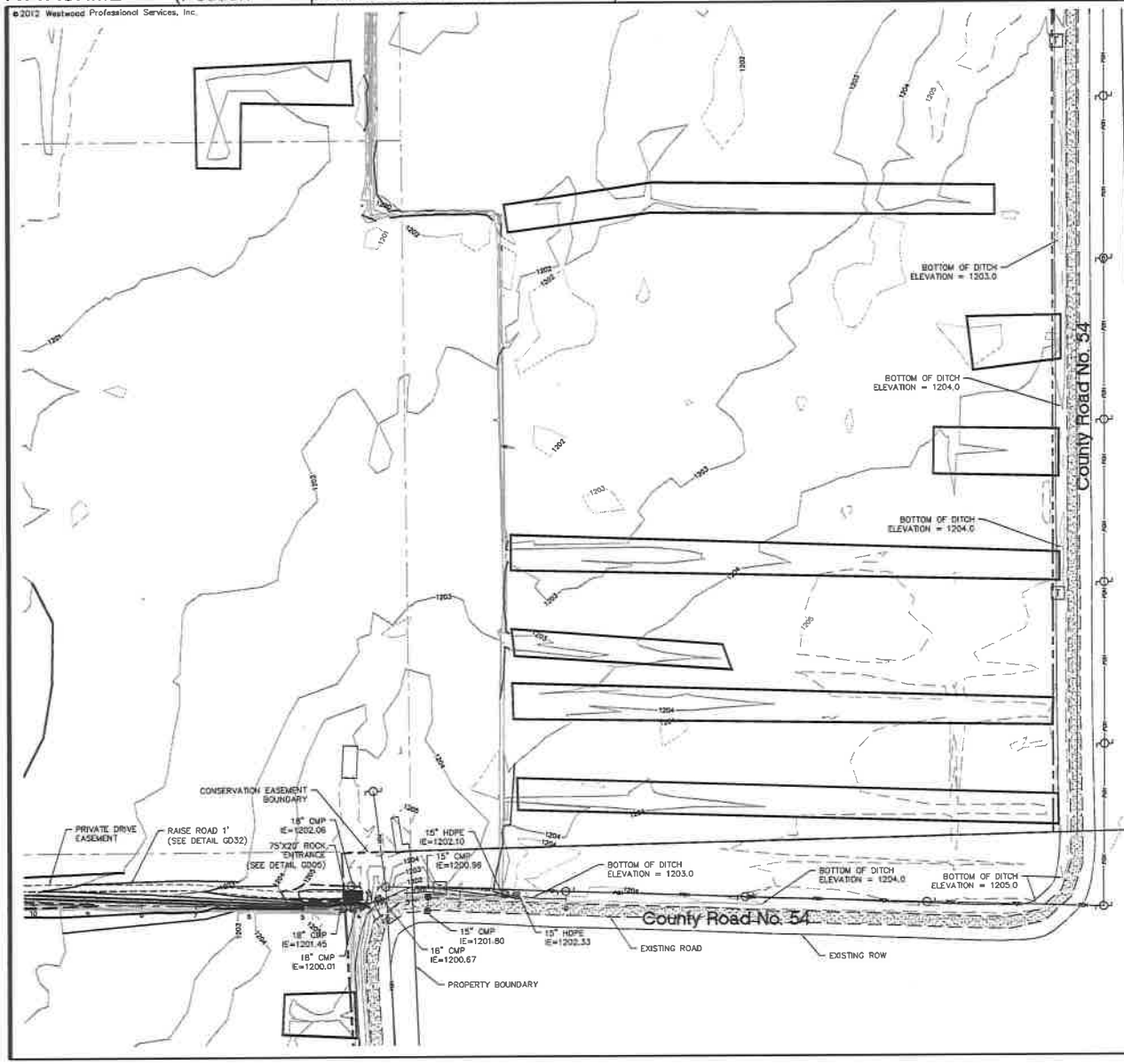

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- MID-FIELD DITCH FILL AREA
- OVERHEAD ELECTRIC
- TRANSFORMER
- POWER POLE

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0' 100' 200' 300'

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Eric J. Hansen
Date 11/15/13 License No. 23838

Revisions
8/5/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed: TTR
Checked: TTR
Drawn: CWO
Record Drawing Revisions

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet B

Date 03/23/12 Sheet 5 OF 12

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

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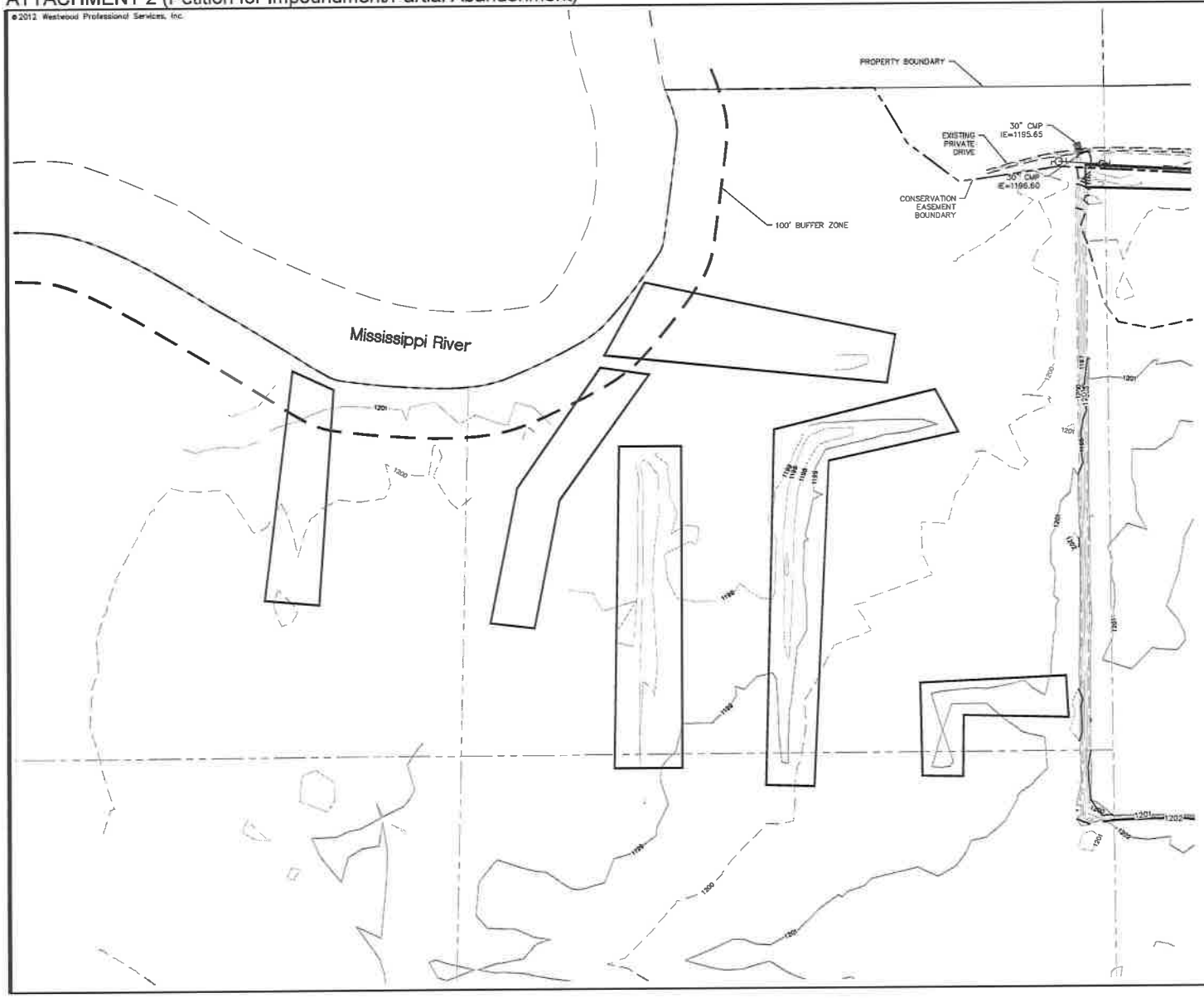
Mn. Toll Free 1-800-252-1166



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- POWER POLE

0' 100' 200' 300'

20047388MTP06.dwg

Date 03/23/12 Sheet 6 OF 12

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Eric J. Hansen
Date 11/15/13 License No. 23636

Revisions:
5/5/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed: TTR
Checked: TTR
Drawn: CWG
Record Quantities for/dates:

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet C

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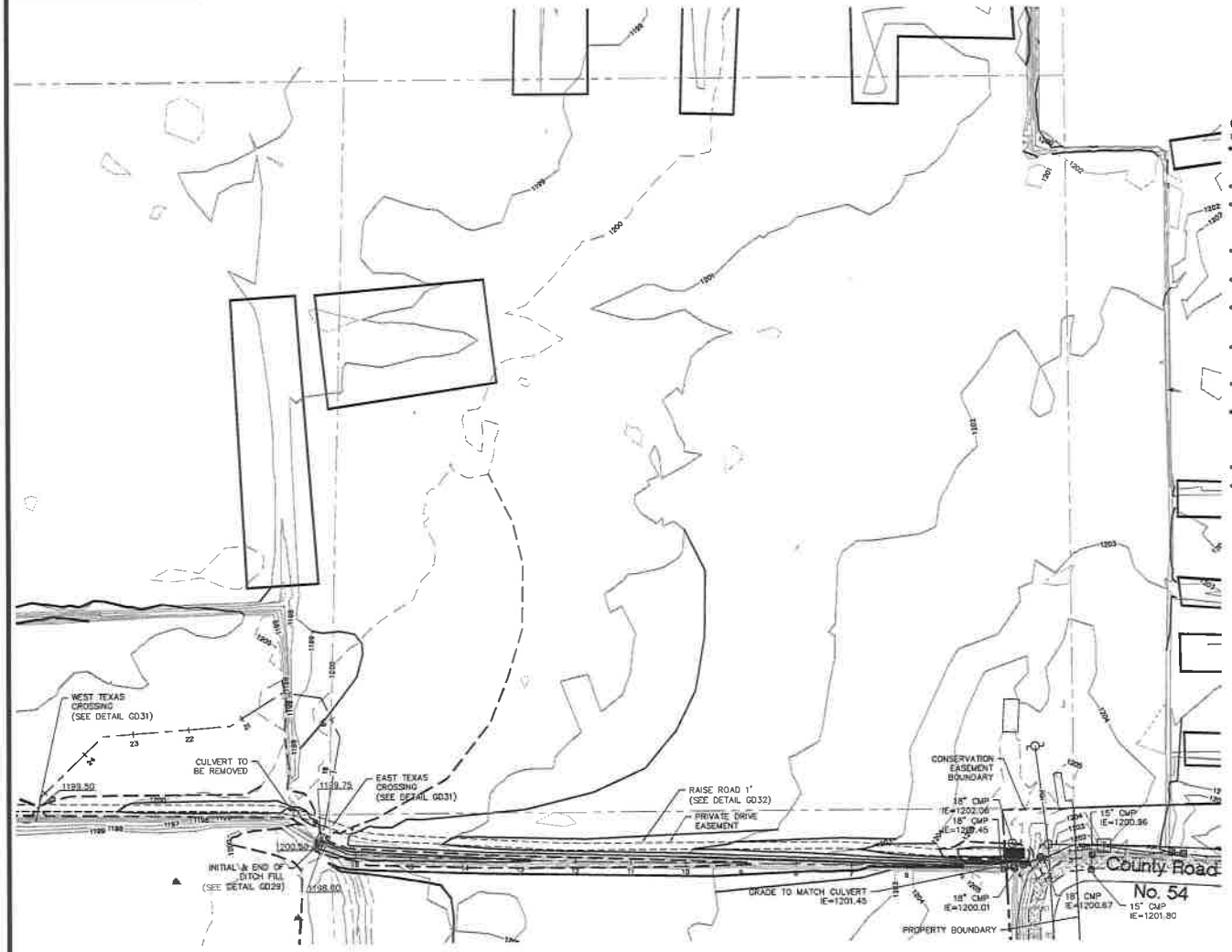

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N

0' 100' 200' 300'

Date: 03/23/12 Sheet: 7 OF 12

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Date: 11/15/13 License No.: 23838

Revisions:
8/2/13 – UPDATE PLAN FOR HYDROLOGY
11/15/13 – PCN REGULATORY COMMENTS

Designed: TTR
Checked: TTR
Drawn: CMG
Record Drawing Set/Date:

Prepared for:
EverStar, LLC
9302 Interlachen Road
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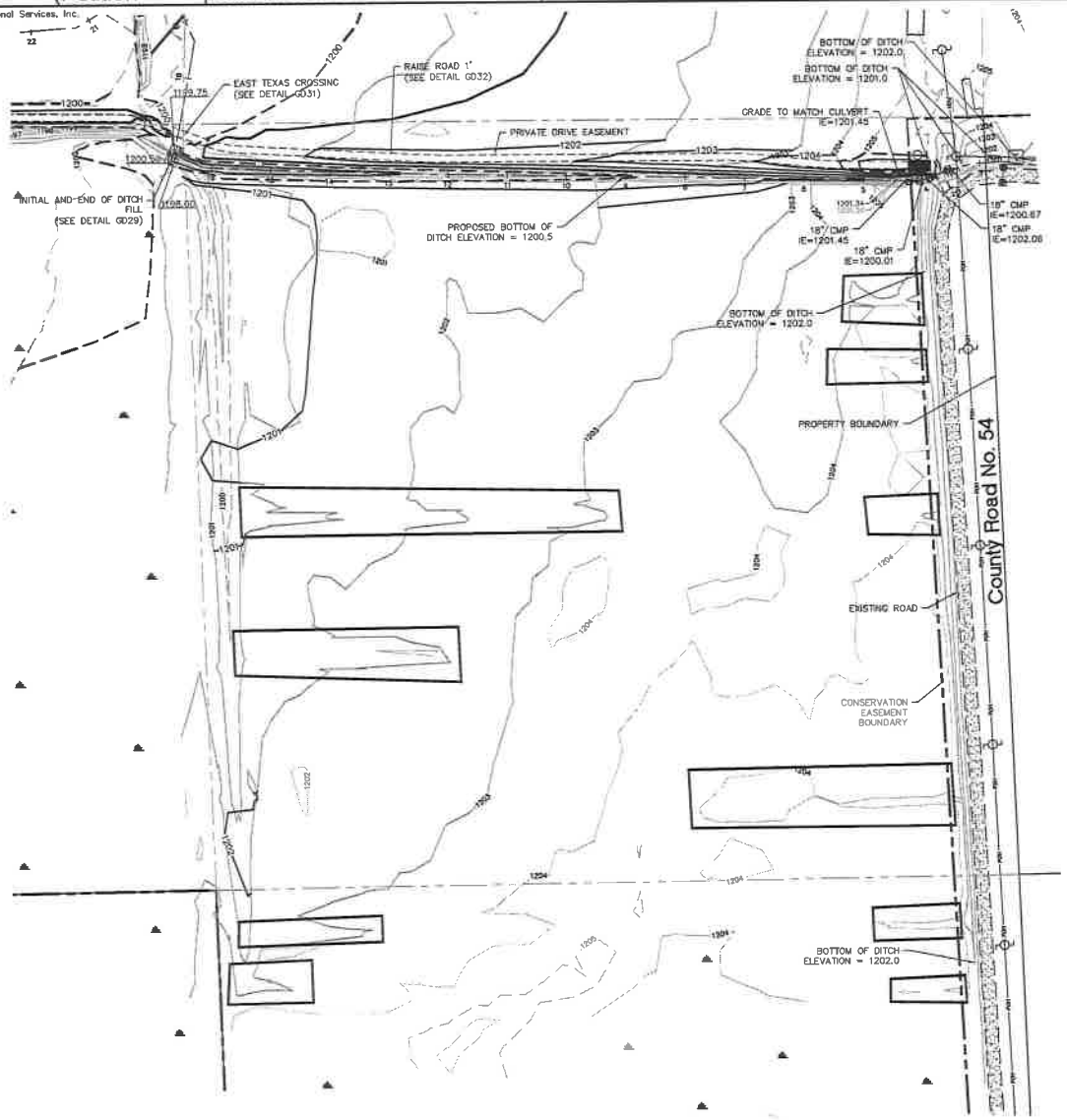
EverStar Wetland Bank Project
Atkin County, Minnesota

Wetland Plan - Sheet D

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)



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LEGEND

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- POWER POLE
- EASEMENT LINE
- 1201.30 PROPOSED SPOT ELEVATION
- 1204.42 EXISTING SPOT ELEVATION

0' 100' 200' 300'

Date: 03/23/12 Sheet: 8 OF 12

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Drawn: CWO
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Prepared for:

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Wetland Plan - Sheet E

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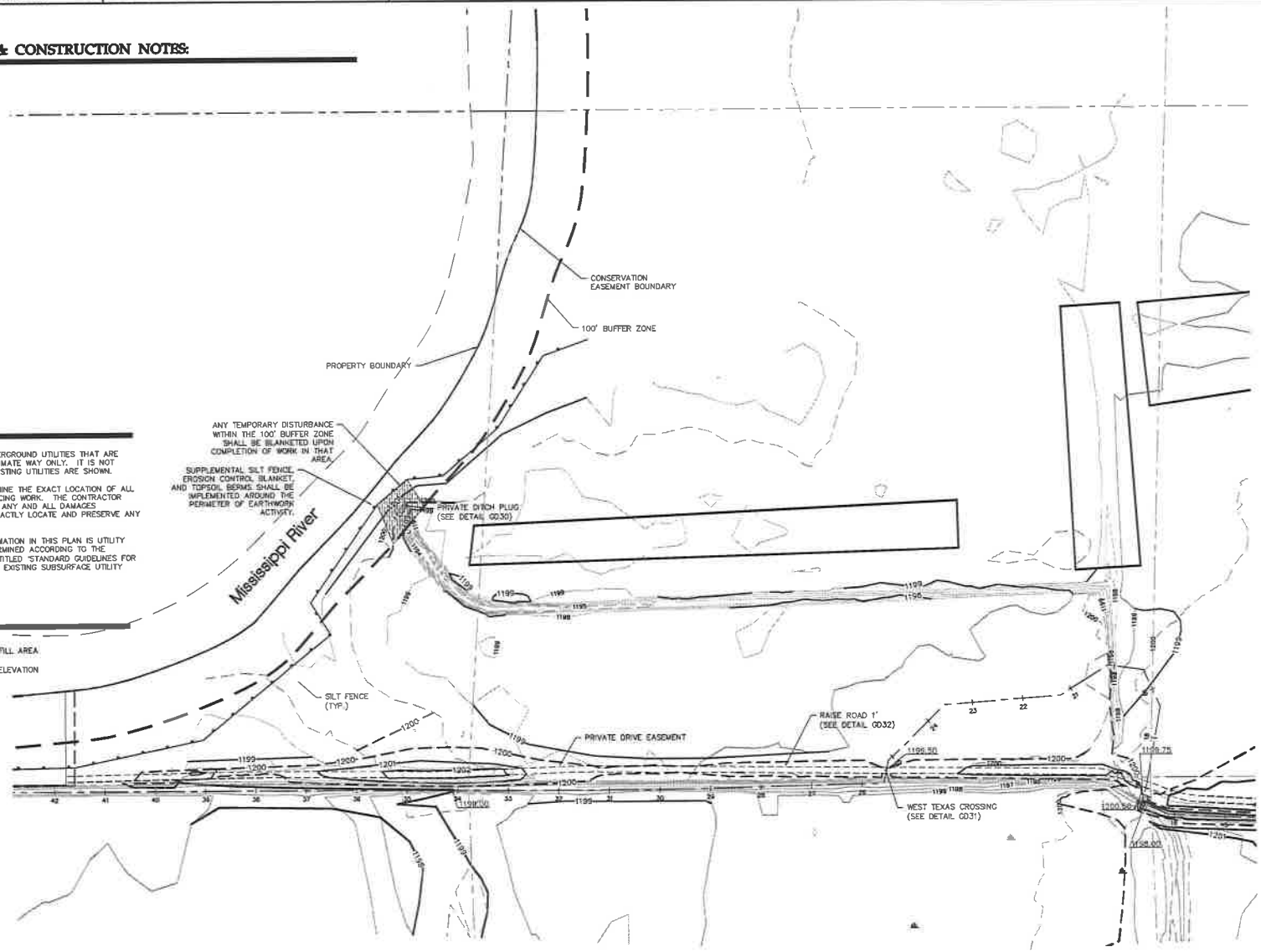
1201.30 PROPOSED SPOT ELEVATION



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I hereby certify that this plan was prepared by me or under my direct supervision and that I am a duly Registered PROFESSIONAL ENGINEER under the laws of the State of Minnesota.

Eric J. Hansen
Date 11/15/13 License No. 23638

Revisions
8/9/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed TJR
Checked TJR
Drawn CWQ
Record Drawing by/date

Prepared for:

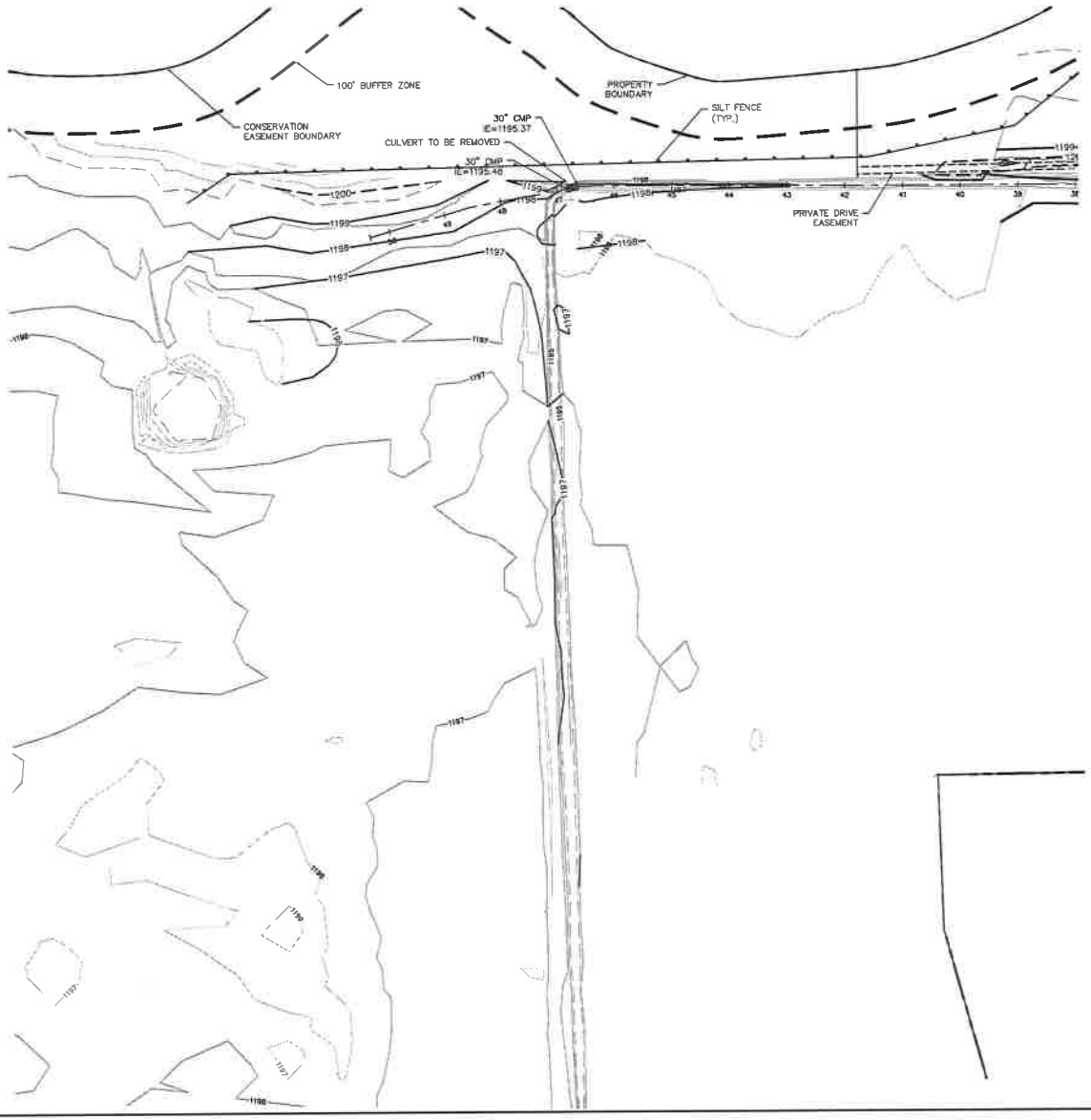
EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet F

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)



Call 48 Hours before digging:
GOPHER STATE ONE CALL
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166

GENERAL GRADING & CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHICAL FEATURES WITH THE OWNERS AND FIELD-VERIFY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM PLAN.
- THE CONTRACTOR IS TO CONTACT GOPHER STATE "ONE-CALL" FOR UTILITY LOCATIONS.
- PRIOR TO THE CONSTRUCTION AND FILLING THE DITCHES THE CONTRACTOR SHALL REMOVE ALL EXISTING VEGETATION, ROOTS, TOPSOIL DEBRIS, PEAT, MUCK AND ANY OTHER MATERIALS HIGH IN ORGANIC-MATTER CONTENT FROM THE DITCH AREA, EXCEPT IN MID-FIELD DITCH FILL AREAS. EACH DITCH SHALL BE CONSTRUCTED WITH NATIVE MATERIALS FROM A BORROW AREA ONSITE AS DESIGNATED BY THE ENGINEER. ALL BORROW AREAS SHALL BE APPROVED BY THE ENGINEER.
- THE DITCH FILL SHALL BE CONSTRUCTED IN ACCORDANCE WITH MNDOT SPECIFICATION 2105 AND SHALL BE COMPACTED MEETING THE QUALITY COMPACTION METHOD.
- FINAL DITCH FILL ELEVATIONS SHALL BE INCREASED BY 10% OF FILL HEIGHT TO ALLOW FOR SETTLEMENT, UNLESS OTHERWISE NOTED.
- REFER TO THE WETLAND BANKING PLAN APPLICATION FOR SPECIFICS REGARDING SEEDING AND VEGETATION ESTABLISHING OF WETLAND AND UPLAND CREDIT AREAS. SEEDING SHALL BE IN ACCORDANCE WITH MNDOT SPECIFICATION 2575 "CONTROLLING EROSION AND ESTABLISHING VEGETATION".
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- PLACEMENT OF STOCKPILES, PLACEMENT OF CONSTRUCTION MATERIALS, AND THE STORAGE OF GAS, OILS, AND OTHER POLLUTANT MATERIALS IS PROHIBITED IN THE 100' BUFFER.
- CONTRACTOR SHALL FIELD VERIFY EROSION CONTROL BMPS AND IMPLEMENT AS NEEDED.

UTILITIES

1) THE LOCATION OF EXISTING UNDERGROUND UTILITIES THAT ARE SHOWN, ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NOT GUARANTEED THAT ANY OR ALL EXISTING UTILITIES ARE SHOWN.

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LEGEND

EASEMENT LINE

N

0' 100' 200' 300'

20047560WTP10.dwg

Date: 03/23/12 Sheet: 10 OF 12

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
PHONE 952-937-5150
FAX 952-937-5822
TOLL-FREE 1-888-937-5150

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Eric J. Hansen
Date 11/15/13 License No. 23838

Revisions:
8/3/13 - UPDATE PLAN PER HYDROLOGY
11/15/13 - PER REGULATORY COMMENTS

Designed: TTR
Checked: TTR
Drawn: CWG
Record Drawing by/date:

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet G

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
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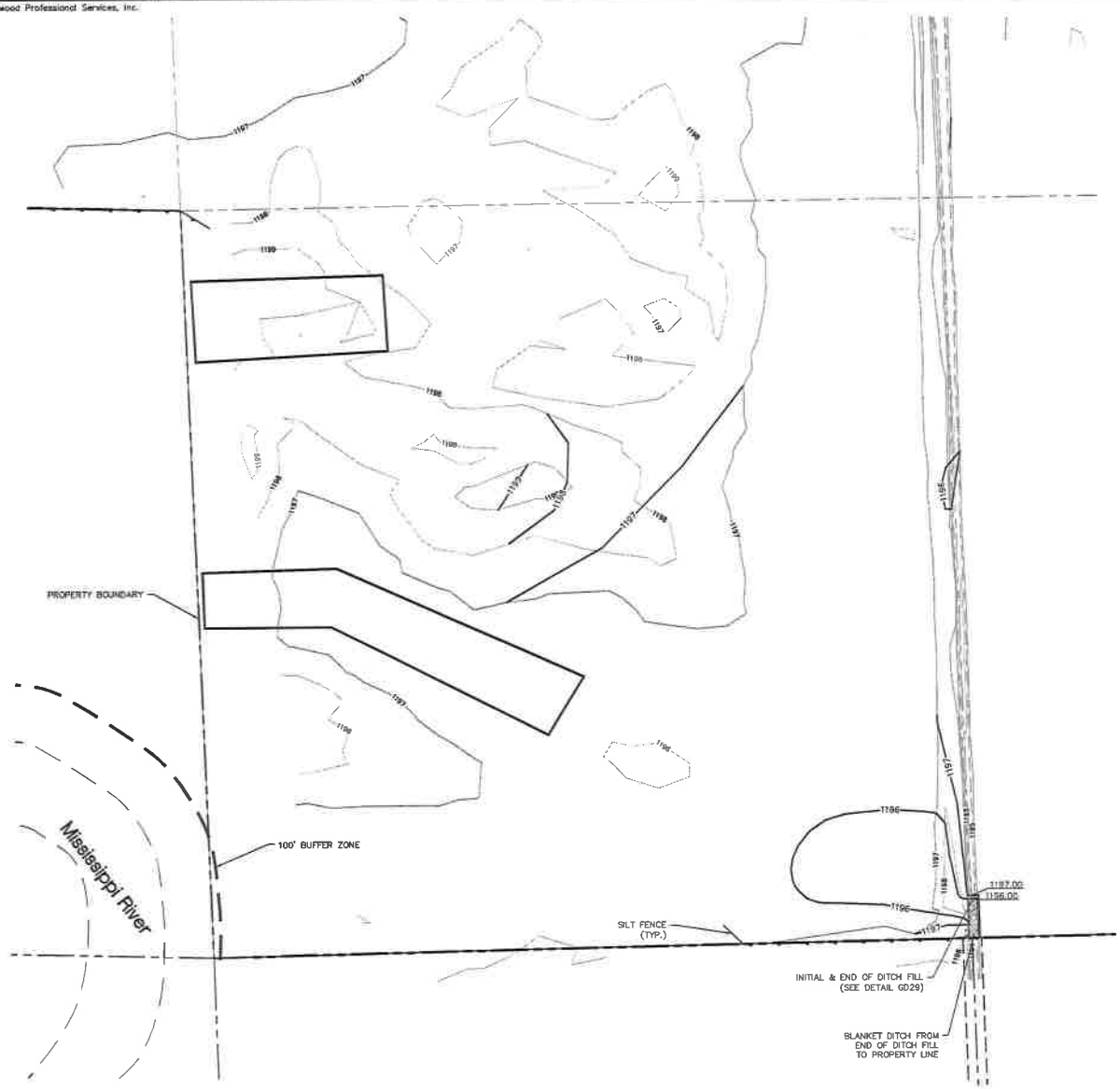
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166



GENERAL GRADING & CONSTRUCTION NOTES:

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LEGEND

- MID-FIELD DITCH FILL AREA
- EASEMENT LINE
- 1201.30 — PROPOSED SPOT ELEVATION

N

0' 100' 200' 300'

Westwood Professional Services, Inc.
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Eden Prairie, MN 55344
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FAX 952-937-5822
TOLL FREE 1-888-937-5150
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Eric J. Hansen
Date 11/15/13 License No. 23838

Revisions:
8/5/13 - UPDATE PLAN PER HYDROLOGY
11/18/13 - PER REGULATORY COMMENTS

Designed TTR
Checked TTR
Drawn CWG
Record Drawing Revisions

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet H

Date 03/23/12 Sheet 11 OF 12

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

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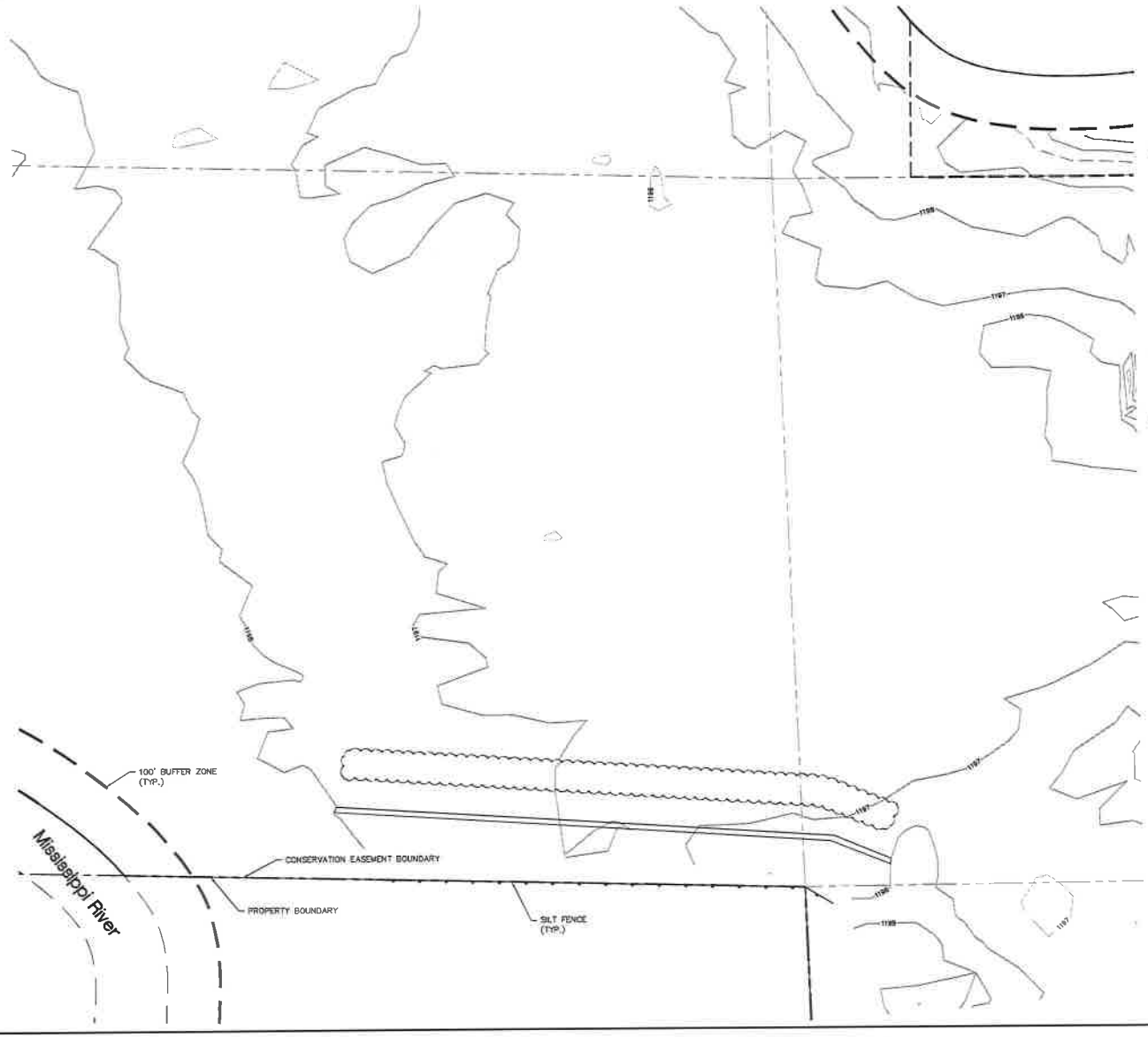
Twin City Area 651-454-0002
Minn. Toll Free 1-800-252-1166



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LEGEND

- LOCATION OF CLAY TO BE EXCAVATED FOR SUBSURFACE CLAY BARRIER
- LOCATION OF SUBSURFACE CLAY BARIER (10' WIDE)
- EASEMENT LINE

N

0' 100' 200' 300'

2004-7366WTP12.dwg

Date 03/23/12 Sheet 12 OF 12

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
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FAX 952-937-5822
TOLL FREE 1-888-937-5150
www.westwoodps.com

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Eric T. Hansen
Date 11/15/13 License No. 23838

Revisions:
9/5/13 - UPDATE PLAN PER HYDROLOGY
9/20/13 - SUBSURFACE CLAY BARRIER DETAIL
11/15/13 - PER REGULATORY COMMENTS

Designed TTR
Checked TTR
Drawn CWG
Record Construction Information

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project

Aitkin County, Minnesota

Wetland Plan - Sheet 1

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

Call 48 Hours before digging:
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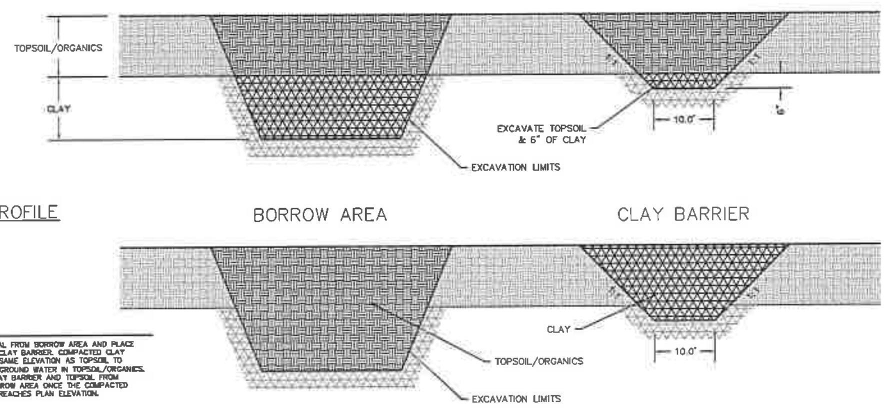
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166

EXISTING PROFILE

PROPOSED PROFILE



NOTES:

1. EXCAVATE CLAY MATERIAL FROM BORROW AREA AND PLACE AND COMPACT CLAY IN CLAY BARRIER. COMPACTED CLAY SHALL BE BROUGHT TO SAME ELEVATION AS TOPSOIL TO PREVENT MIGRATION OF GROUND WATER IN TOPSOIL/ORGANICS.
2. PLACE SPOILS FROM CLAY BARRIER AND TOPSOIL FROM BORROW AREA INTO BORROW AREA ONCE THE COMPACTED CLAY IN CLAY BARRIER REACHES PLAN ELEVATION.

SUBSURFACE CLAY BARRIER CONSTRUCTION DETAIL

Westwood

Westwood Professional Services, Inc.
7699 Anagram Drive
Eden Prairie, MN 55344
PHONE 952-937-5150
FAX 952-937-5822
TOLL FREE 1-888-937-5150

Eric J. Hansen
Date 09/03/13 License No. 23838

Revisions:
8/3/13 – SUBSURFACE CLAY BARRIER DETAIL

Designed:
Checked:
Drawn:
Record Drawing by/date

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project
Aitkin County, Minnesota

Date: 03/23/12 Sheet: 12A of 12

Subsurface Clay Barrier Construction Detail

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

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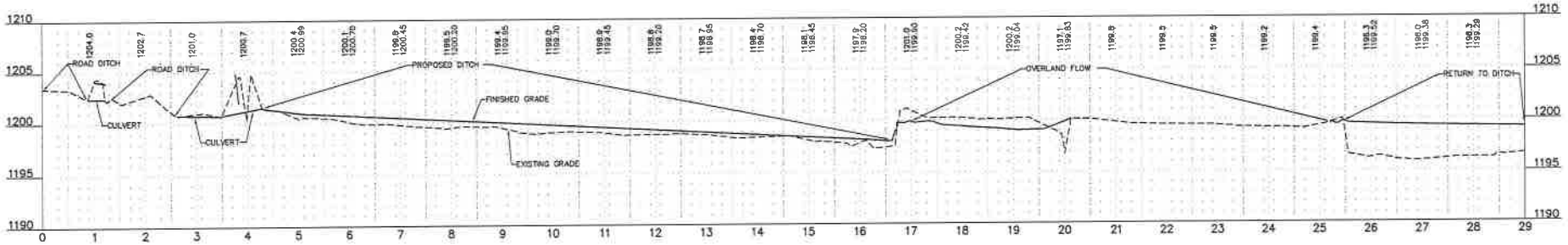
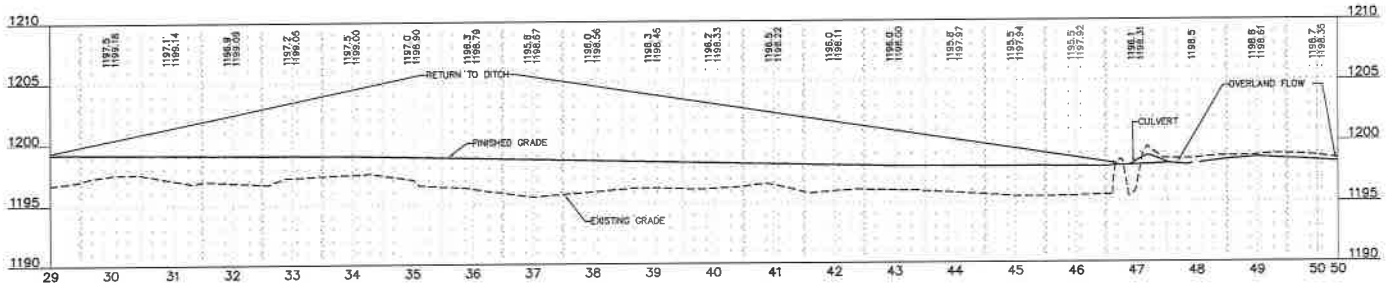
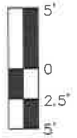
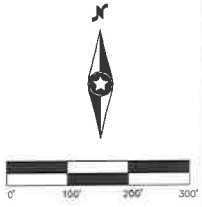
Twin City Area 651-454-0002
Minn. Toll Free 1-800-252-1166









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Date: 03/23/12 Sheet: 12B OF 12

Westwood

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Eden Prairie, MN 55344
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Eric J. Hansen
Date: 11/19/13 License No. 23838

Revisions

Designed: TJS
Checked: EJH
Drawn: JSS
Record Drawing Revisions

Prepared for:

EverStar, LLC
9002 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project
Aitkin County, Minnesota

Ditch Profile

ATTACHMENT 2 (Petition for Impoundment/Partial Abandonment)

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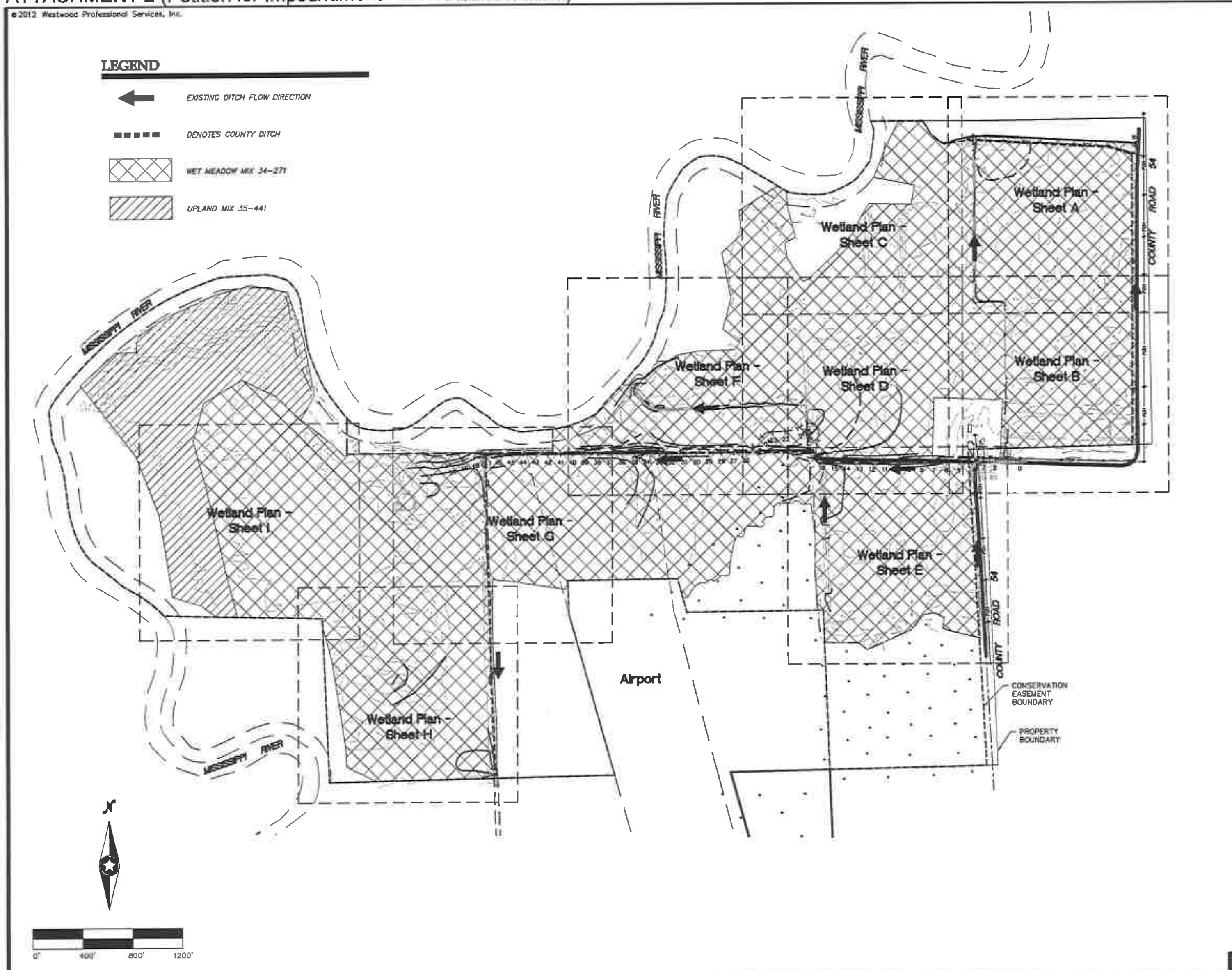
Twin City Area 651-454-0002
Mn. Toll Free 1-800-252-1166



Upland Mix 35-441

Common Name	Scientific Name	Rate (kg/ha)	Rate (lb/ac)	% of Mix (% by wt)	Seeds/ sq ft
big bluestem	Andropogon gerardii	1.12	1.00	8.08%	3.67
side-oats grama	Bouteloua curtipendula	1.35	1.20	10.28%	2.64
nodding wild rye	Elymus canadensis	1.12	1.00	8.08%	1.61
slender wheatgrass	Elymus trachycaulus	1.12	1.00	8.11%	2.34
porcupine grass	Hesperostipa spartea	0.47	0.42	3.62%	0.11
switchgrass	Panicum virgatum	0.20	0.18	1.56%	0.96
little bluestem	Schizachyrium scoparium	1.68	1.50	12.80%	8.28
Indian grass	Sorghastrum nutans	1.35	1.20	10.91%	5.28
	Total Grasses	8.41	7.50	66.15%	25.37
Prairie Wild Onion	Allium stellatum	0.03	0.03	0.27%	0.13
Canada milk vetch	Astragalus canadensis	0.07	0.06	0.54%	0.37
white prairie clover	Dalea candida	0.07	0.06	0.55%	0.42
purple prairie clover	Dalea purpurea	0.10	0.09	0.83%	0.60
Canada tick trefoil	Desmodium canadense	0.09	0.08	0.77%	0.17
ox-eye	Heliopsis helianthoides	0.07	0.06	0.55%	0.14
rough blazing star	Liatris aspera	0.03	0.03	0.24%	0.18
great blazing star	Liatris pycnostachya	0.07	0.06	0.54%	0.24
wild bergamot	Monarda fistulosa	0.03	0.03	0.27%	0.77
stiff goldenrod	Oligoneuron rigidum	0.03	0.03	0.27%	0.45
Virginia mountain mint	Pycnanthemum virginianum	0.04	0.04	0.34%	3.00
prairie coneflower	Ratibida columnifera	0.07	0.06	0.55%	0.50
black-eyed susan	Rudbeckia hirta	0.08	0.07	0.58%	2.20
heath aster	Symphyotrichum ericoides	0.01	0.01	0.14%	1.78
smooth aster	Symphyotrichum laeve	0.03	0.03	0.27%	0.61
blue vervain	Verbena hastata	0.10	0.09	0.77%	2.91
golden alexanders	Zizia aurea	0.19	0.17	1.50%	0.70
	Total Forbs	1.13	1.00	8.09%	14.81
Oats or winter wheat (see note at beginning of list for recommended dates)		2.86	2.55	22.76%	1.12
	Total Cover Crop	2.86	2.55	22.76%	1.12
	Totals:	13.33	11.88	100.00%	41.29
Purpose:	Regional mesic prairie reconstruction for wetland mitigation, ecological restoration, or conservation program plantings.				
Planting Area:	Tallgrass Aspen Parklands Province, Red River Prairie Section, Hardwood Hills subsection of the MN & NE (A Moraine) Section, may extend into the far western portions of the Laurentian Mixed Forest Province. MnDOT Districts 2(west) & 4(north).				

Wet Meadow Seed Mix 34-271

Common Name	Scientific Name	Rate (kg/ha)	Rate (lb/ac)	% of Mix (% by wt)	Seeds/ sq ft
fringed brome	Bromus ciliatus	1.23	1.10	8.18%	4.45
bluejoint	Calamagrostis canadensis	0.06	0.05	0.41%	5.50
Virginia wild rye	Elymus virginicus	1.12	1.00	8.37%	1.85
rice cut grass	Leersia oryzoides	0.28	0.25	2.07%	3.10
tall manna grass	Glyceria grandis	0.17	0.15	1.26%	3.80
fowl manna grass	Glyceria striata	0.11	0.10	0.83%	3.30
fowl bluegrass	Poa palustris	0.39	0.35	2.88%	18.50
	Total Grasses	3.36	3.00	25.04%	37.00
bristly sedge	Carex comosa	0.24	0.21	1.78%	2.36
awl-fruited brown sedge	Carex cristatella	0.00	0.00	0.47%	1.90
awl-fruited sedge	Carex stipata	0.19	0.17	1.40%	2.10
tussock sedge	Carex stricta	0.03	0.03	0.21%	0.50
fox sedge	Carex vulpinoidea	0.16	0.14	1.15%	5.00
path rush	Juncus tenuis	0.06	0.04	0.34%	15.00
dark green bulrush	Scirpus atrovirens	0.20	0.18	1.44%	35.00
woolgrass	Scirpus cyperinus	0.09	0.08	0.67%	50.00
	Total Sedges and Rushes	1.01	0.90	7.44%	108.30
marsh milkweed	Asclepias incarnata	0.37	0.34	2.83%	0.40
common boneset	Eupatorium perfoliatum	0.02	0.02	0.16%	1.30
grass-leaved goldenrod	Euthamia graminifolia	0.01	0.01	0.06%	1.80
spotted Joe pye weed	Eutrochium maculatum	0.02	0.02	0.16%	0.73
autumn sneezeweed	Helenium autumnale	0.03	0.03	0.25%	1.90
sawtooth sunflower	Helianthus grosseserratus	0.04	0.04	0.30%	0.30
great lobelia	Lobelia siphilitica	0.02	0.02	0.13%	2.90
blue monkey flower	Mimulus ringens	0.01	0.01	0.07%	4.80
Virginia mountain mint	Pycnanthemum virginianum	0.07	0.06	0.57%	5.10
giant goldenrod	Solidago gigantea	0.02	0.02	0.14%	1.50
eastern panicled aster	Symphyotrichum lanceolatum	0.03	0.03	0.22%	1.50
red-stemmed aster	Symphyotrichum puniceum	0.19	0.17	1.42%	2.90
tall meadowrue	Thalictrum dasycarpum	0.01	0.01	0.10%	0.11
blue vervain	Verbena hastata	0.15	0.13	1.12%	4.81
fascicled ironweed	Vernonia fasciculata	0.03	0.03	0.26%	0.30
Culver's root	Veronicastrum virginicum	0.01	0.01	0.12%	4.20
golden alexanders	Zizia aurea	0.28	0.25	3.09%	1.00
	Total Forbs	1.23	1.15	9.19%	38.88
Oats or winter wheat (see note at beginning of list for recommended dates)		7.95	7.00	58.37%	3.12
	Total Cover Crop	7.89	7.00	58.37%	3.12
	Totals:	13.45	12.05	100.00%	185.44
Purpose:	Wet meadow / Sedge meadow reconstruction for wetland mitigation or ecological restoration projects				
Planting Area:	Tallgrass Aspen Parklands, Prairie Parkland, and Eastern Broadleaf Forest Provinces. MnDOT Districts 2(west), 3B, 4, Metro, 6, 7 & 8.				

200473SEP1F13.dwg

Date 03/23/12 Sheet 444 OF 12

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Westwood

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Eric J. Hansen
Date 11/15/13 License No. 23538

Revisions:

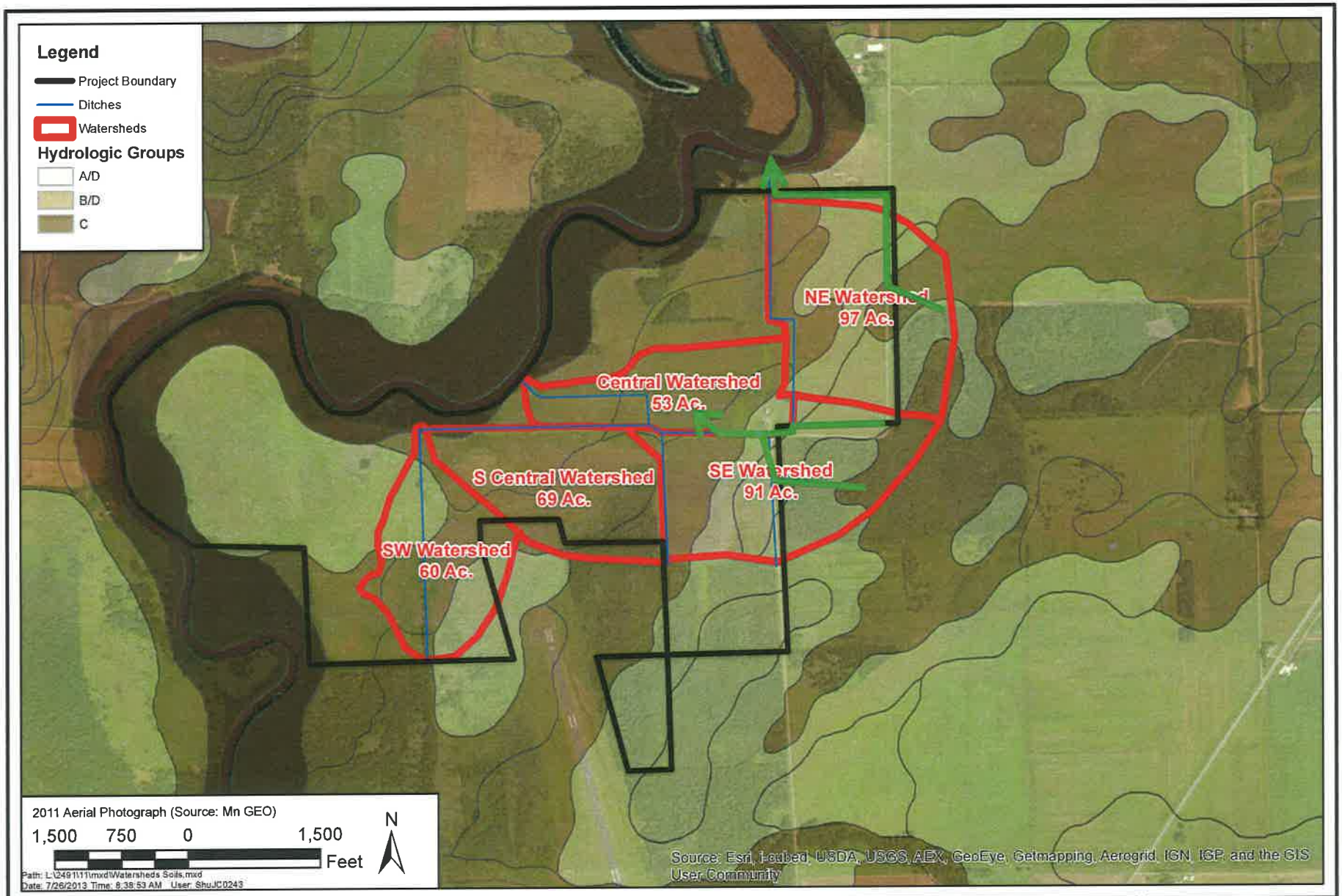
Designed: TTS
Checked: EJH
Drawn: JMI
Record Drawing by/date:

Prepared for:

EverStar, LLC
9302 Interlachen Road
Lake Shore, Minnesota 56468

EverStar Wetland Bank Project
Aitkin County, Minnesota

Revegetation Plan



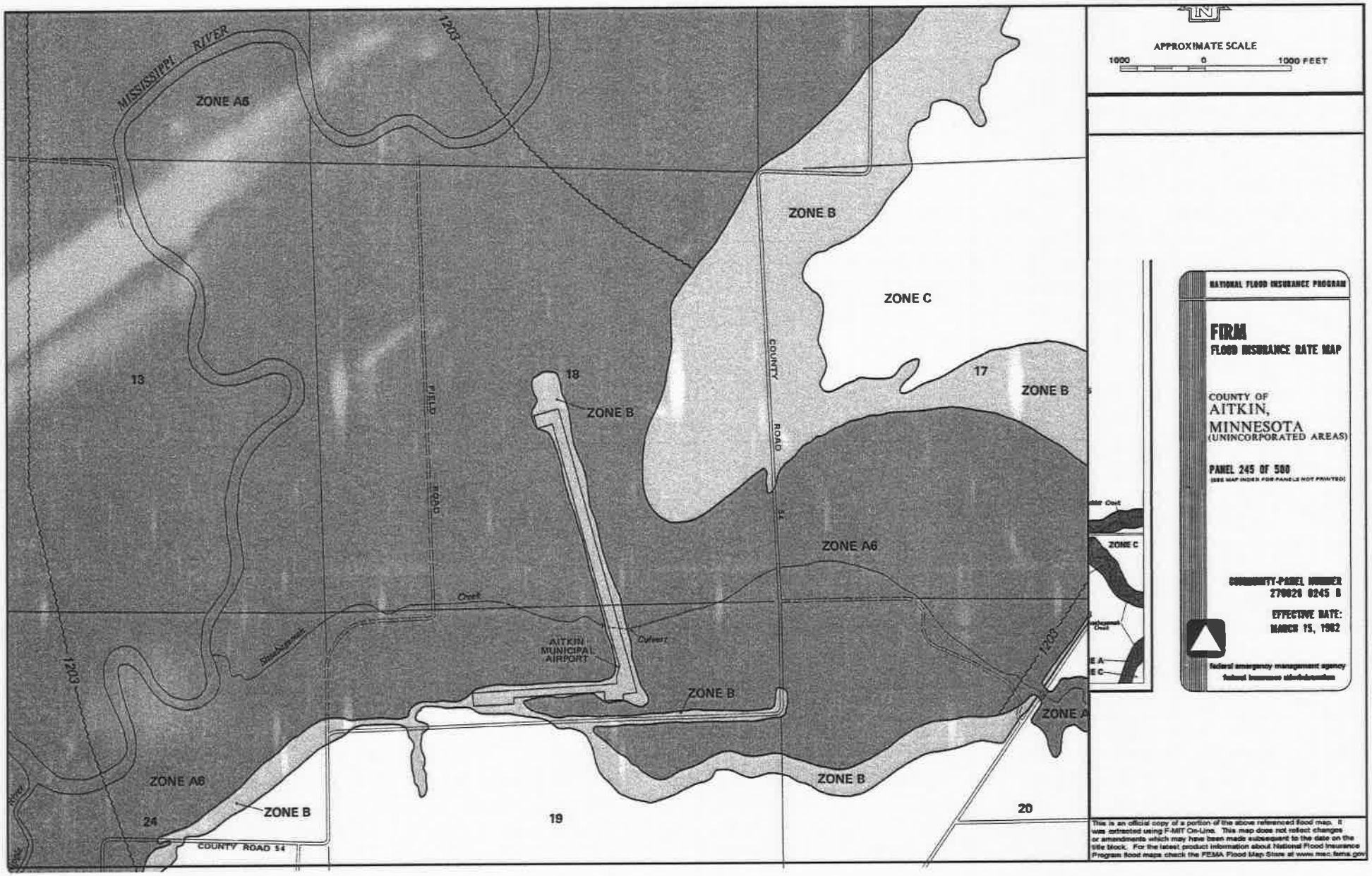
EVERSTAR WETLAND BANK

Soils and Watersheds

Wenck
Engineers - Scientists
Business Professionals
www.wenck.com
1800 Pioneer Creek Center
Maple Plain, MN 55359-0429
1-800-472-2232

JULY 2013

Figure 1


MISSISSIPPI RIVER
1203
ZONE A6
ZONE B
ZONE C
13
18
17
ZONE B
FIELD ROAD
COUNTY ROAD 54
ZONE B
ZONE A6
Creek
Culvert
AITKIN MUNICIPAL AIRPORT
1203
ZONE B
ZONE A
ZONE A6
ZONE B
24
19
20
COUNTY ROAD 54
APPROXIMATE SCALE
1000 0 1000 FEET
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
COUNTY OF
AITKIN,
MINNESOTA
(UNINCORPORATED AREAS)
PANEL 245 OF 580
(SEE MAP INDEX FOR PANELS NOT PRINTED)
COMMUNITY-PANEL NUMBER
270021 0245 B
EFFECTIVE DATE:
MARCH 15, 1982
federal emergency management agency
federal insurance administration
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

5D
Part 2

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TECHNICAL MEMORANDUM

TO: Eric Hansen, PE, Westwood Professional Services

FROM: Joel Toso, PE

DATE: September 25, 2013

SUBJECT: EverStar Wetland Bank Hydrologic Analysis

This technical memo presents the hydrologic analysis performed for the EverStar Wetland Bank just north of the airport near Aitkin, Minnesota. The project involves modifying existing ditches on site to re-establish the hydrology that previously supplied the wetlands of the area.

We have analyzed the site runoff from three rain events; a typical 2-year storm of 2.6-inches, the 10-year flood event of 4.0-inches, and the 100-year flood event of 5.7 inches. Standard Natural Resources Conservation Service (NRCS) methods are used with the 24-hour Type II rainfall distribution. The site soils and primary watersheds draining to the ditches to be modified are shown in Figure 1. The soils are mostly sandy loam or loam. The model results are provided in the attached pages.

The analysis considers the pre-modification conditions created by the ditch in evaluated storm events and the post-modification conditions in the same storm events. The analysis is directed at determining whether the proposed modification of the drainage system will impair the utility of the drainage system or deprive affected land owners of its benefit. The analysis also considered whether the proposed modification of the drainage system would result in off-site impacts requiring flowage or other easements.

Modeling details are provided for both existing and proposed conditions, 56 numbered pages for each condition. Each set of results is preceded by a routing diagram that illustrates the modeled components of the site. Watershed names correspond to those shown in Figure 1.

The model results show that the existing drainage system conveys the 2-year storm efficiently, containing all the water within the ditch banks. The 100-year event exceeds the capacity of the drainage system resulting in overland flow. It should be noted that the 100-year event modeled for this report is that for the local drainage area. The 100-year event of the adjacent Mississippi River floods a significant portion of the site at approximately Elevation 1203 as shown on the attached Flood Insurance Rate Map (FIRM).

It is proposed that the majority of ditches on site be modified to re-establish pre-ditched grades. Ditches along the perimeter of the property that convey offsite storm water will be maintained. The runoff currently being conveyed to the modified ditches will flow overland in shallow swales toward the

river to the west. Since the 100-year runoff exceeds the capacity of the ditches for existing conditions and flows overland, similar flood levels are predicted for proposed conditions.

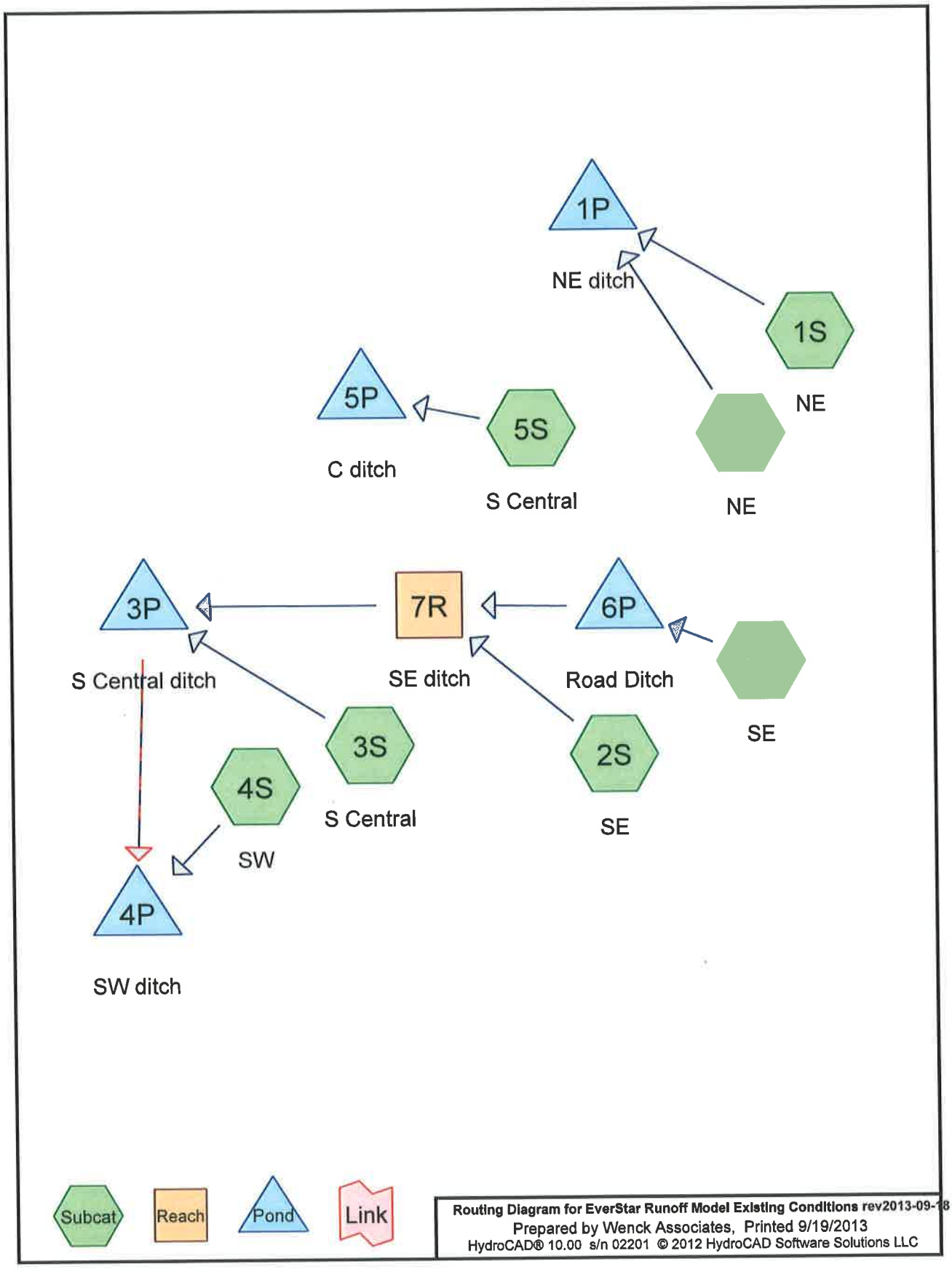
The result of the project is expected to re-establish the wetland hydrology of the area by maintaining perched water in the subsoil. Surface runoff will not be conveyed by ditches, but will flow overland allowing it to infiltrate and recharge perched water in the subsoil.

There will be no change to drainage offsite based on modeling of the post-modification conditions in the evaluated storm events. Offsite water that reaches the site from the east will be conveyed downstream as it does under existing conditions without increasing upstream flow levels. The flow arrows in Figure 1 show the flow paths for offsite water conveyance. The attached modeling for this project specifically partitions offsite drainage to assist with determining the effect of the proposed work. The site grading has been designed to accommodate the inflow of water from the benefited properties and roads to the east.

The offsite watershed northeast of the site drains into an onsite road ditch and is conveyed north through a 30-inch culvert (Node 1P in the attached model output). There will be no change to this drainage with exception of the diversion of a portion of onsite watershed through a new swale directed to the west. This will actual improve offsite drainage by providing increased capacity at the 30-inch culvert outlet.

Drainage from of the offsite portion of the Southeast watershed (Figure 1) drains into an onsite road ditch, and is controlled by an 18-inch culvert located just northwest of the bend in the roadway (Node 6P in the attached model output). The downstream ditch receiving the drainage will remain as is for approximately 500-feet and then be re-routed through a new swale to the northwest (Node 7R in the attached model output). The flow capacity of the new swale will significantly exceed the capacity of the existing ditch; compare the highlighted capacities on Page 10 of both the attached existing and proposed modeling results. Water levels at the downstream end of the 18-inch controlling culvert will not be increased; therefore offsite drainage will not be affected by the proposed wetland bank.

No additional water will be discharged to adjacent property. Any increase in groundwater levels will be confined to the project area. Surficial groundwater flows generally west to the river. The project site is mostly north and west of the adjacent property and itself, abuts the river. Groundwater flows from the project area north and west to the river, away from the adjacent property. There are no changes proposed to the drainage systems serving adjacent properties.



Routing Diagram for EverStar Runoff Model Existing Conditions rev2013-09-18
Prepared by Wenck Associates, Printed 9/19/2013
HydroCAD® 10.00 s/n 02201 © 2012 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
195.200	49	Pasture/grassland/range, Fair, HSG A (1S, 2S, 4S, 6S, 7S)
278.800	69	Pasture/grassland/range, Fair, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S)
474.000	**61**	**TOTAL AREA**

Summary for Subcatchment 1S: NE

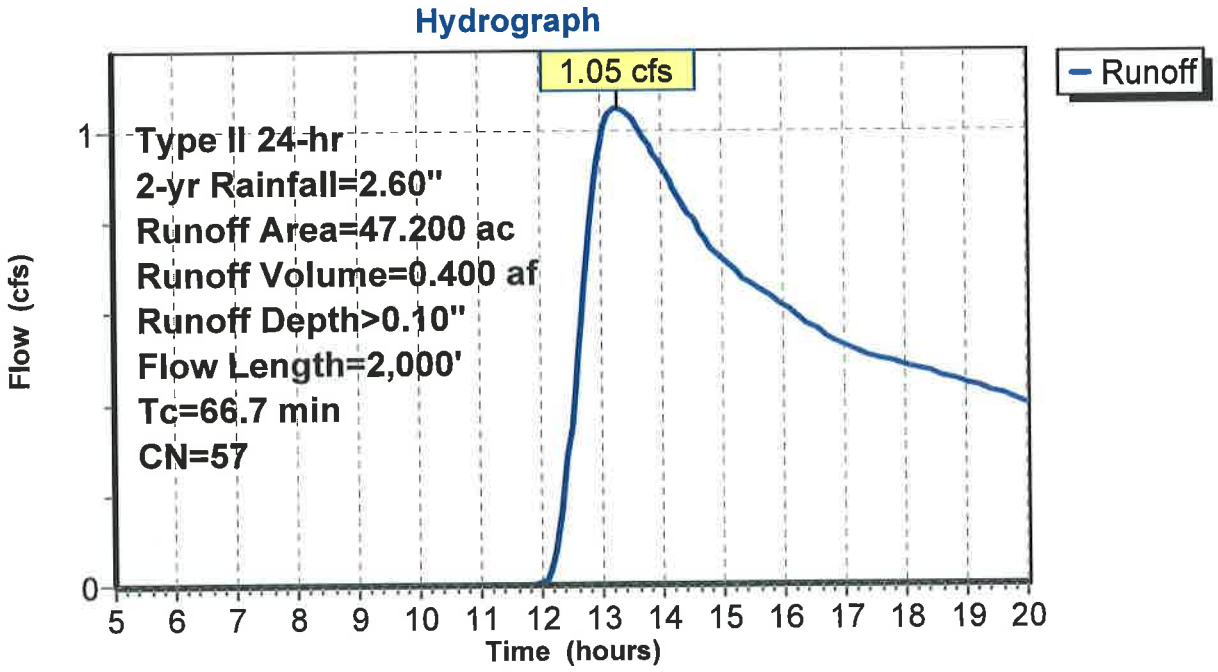
Runoff = 1.05 cfs @ 13.27 hrs, Volume= 0.400 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
28.300	49	Pasture/grassland/range, Fair, HSG A
18.900	69	Pasture/grassland/range, Fair, HSG B
47.200	57	Weighted Average
47.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 1S: NE



Summary for Subcatchment 2S: SE

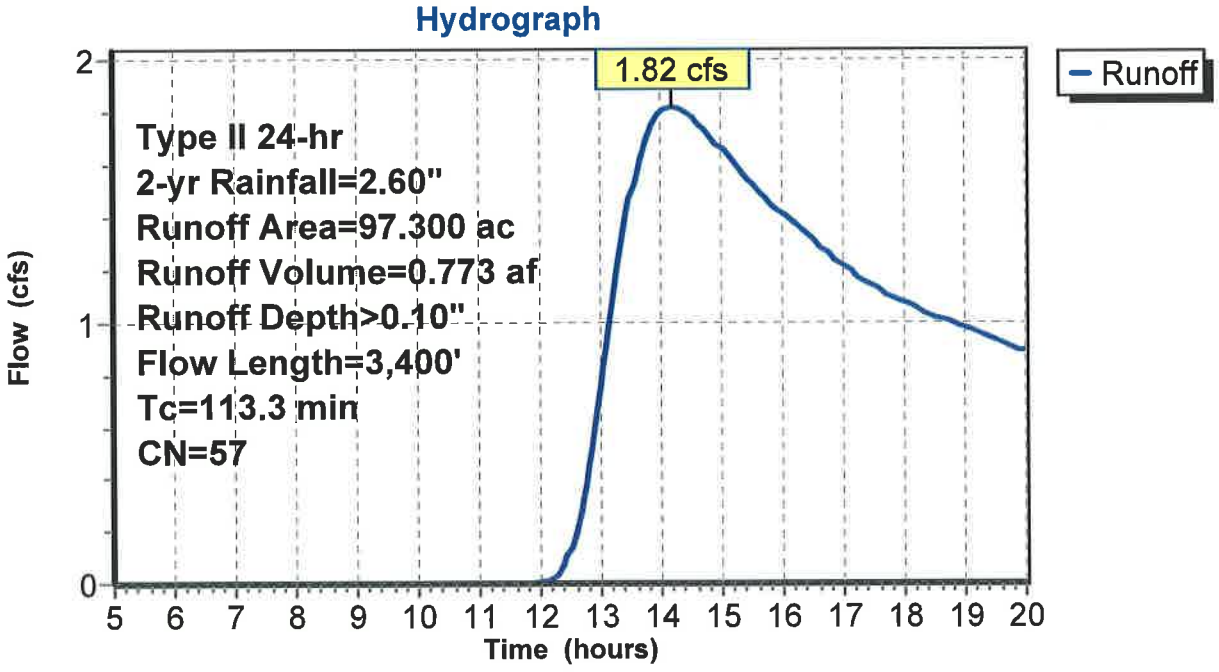
Runoff = 1.82 cfs @ 14.19 hrs, Volume= 0.773 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
58.400	49	Pasture/grassland/range, Fair, HSG A
38.900	69	Pasture/grassland/range, Fair, HSG B
97.300	57	Weighted Average
97.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 2S: SE



Summary for Subcatchment 3S: S Central

Runoff = 13.84 cfs @ 12.63 hrs, Volume= 2.280 af, Depth> 0.40"

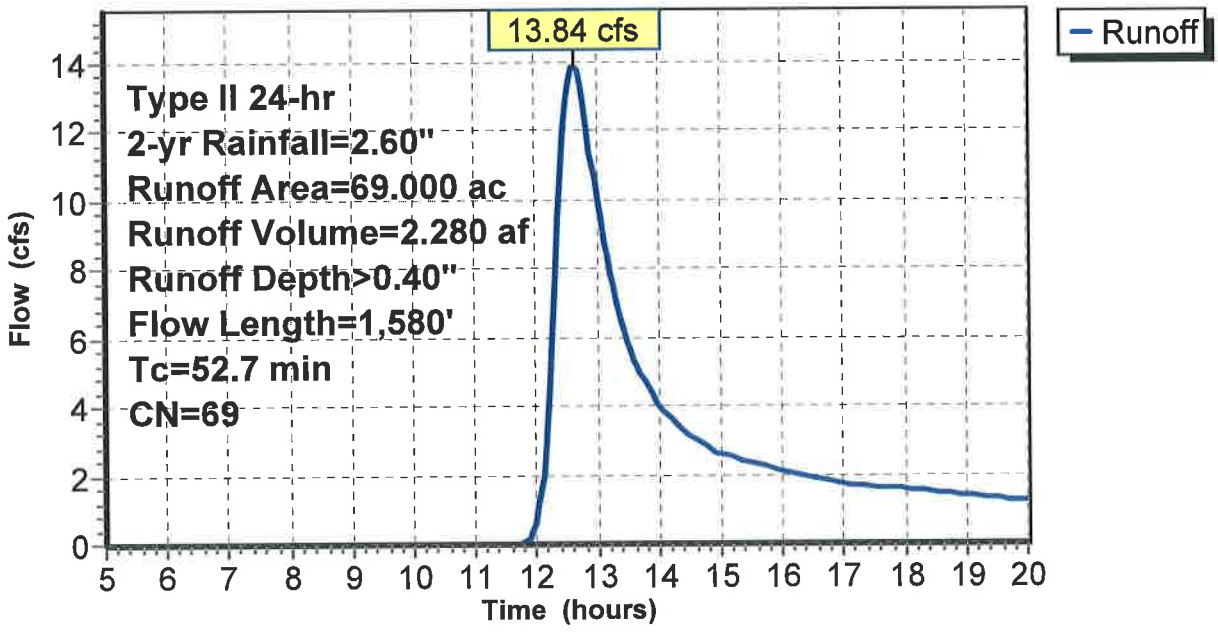
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
69.000	69	Pasture/grassland/range, Fair, HSG B
69.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.7	1,580		0.50		**Direct Entry,**

Subcatchment 3S: S Central

Hydrograph



Summary for Subcatchment 4S: SW

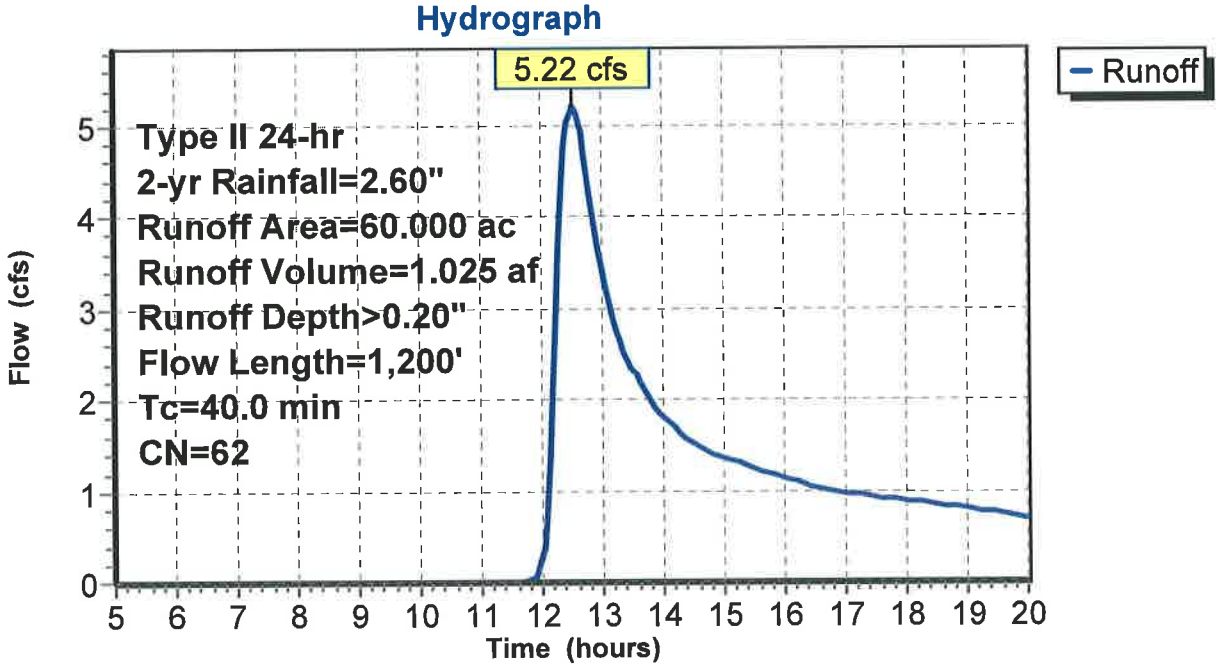
Runoff = 5.22 cfs @ 12.53 hrs, Volume= 1.025 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
20.000	49	Pasture/grassland/range, Fair, HSG A
40.000	69	Pasture/grassland/range, Fair, HSG B
60.000	62	Weighted Average
60.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	1,200		0.50		**Direct Entry,**

Subcatchment 4S: SW



Summary for Subcatchment 5S: S Central

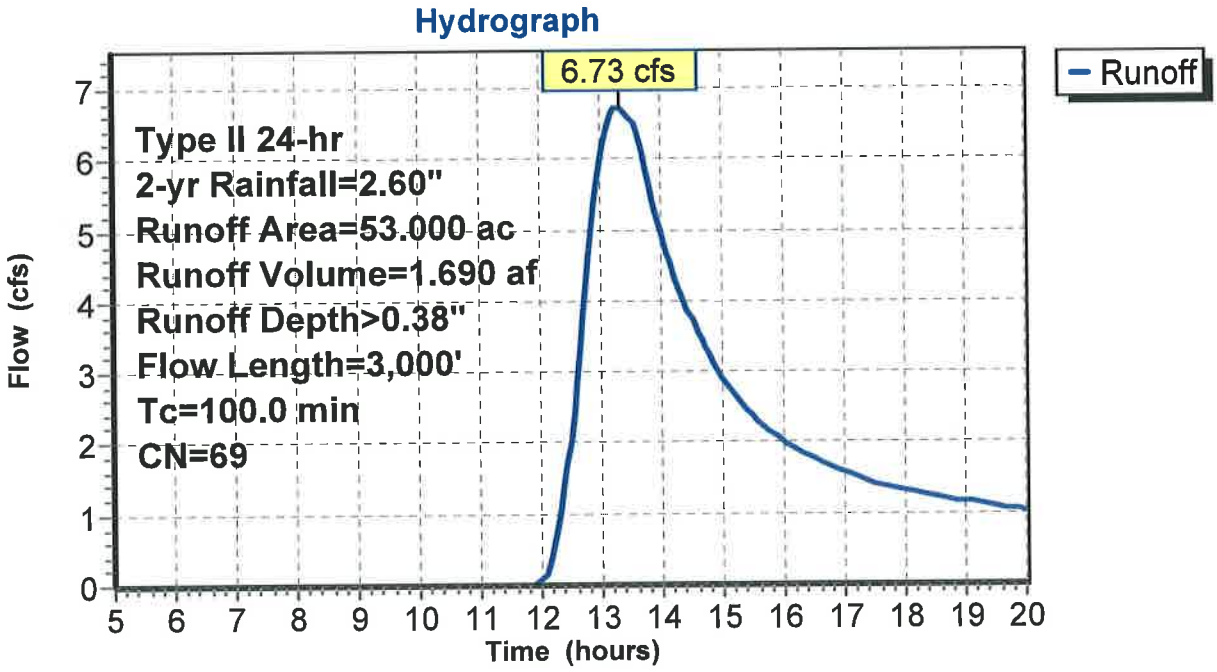
Runoff = 6.73 cfs @ 13.33 hrs, Volume= 1.690 af, Depth> 0.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
53.000	69	Pasture/grassland/range, Fair, HSG B
53.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
100.0	3,000		0.50		**Direct Entry,**

Subcatchment 5S: S Central



Summary for Subcatchment 6S: SE

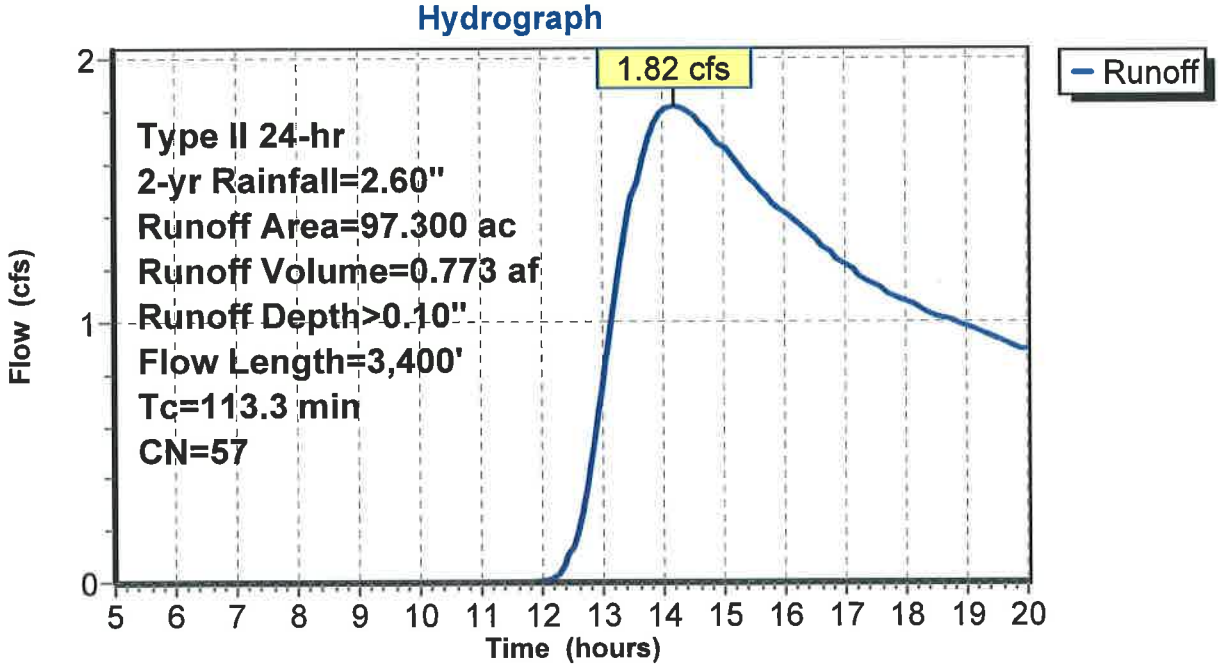
Runoff = 1.82 cfs @ 14.19 hrs, Volume= 0.773 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
58.400	49	Pasture/grassland/range, Fair, HSG A
38.900	69	Pasture/grassland/range, Fair, HSG B
97.300	57	Weighted Average
97.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 6S: SE



Summary for Subcatchment 7S: NE

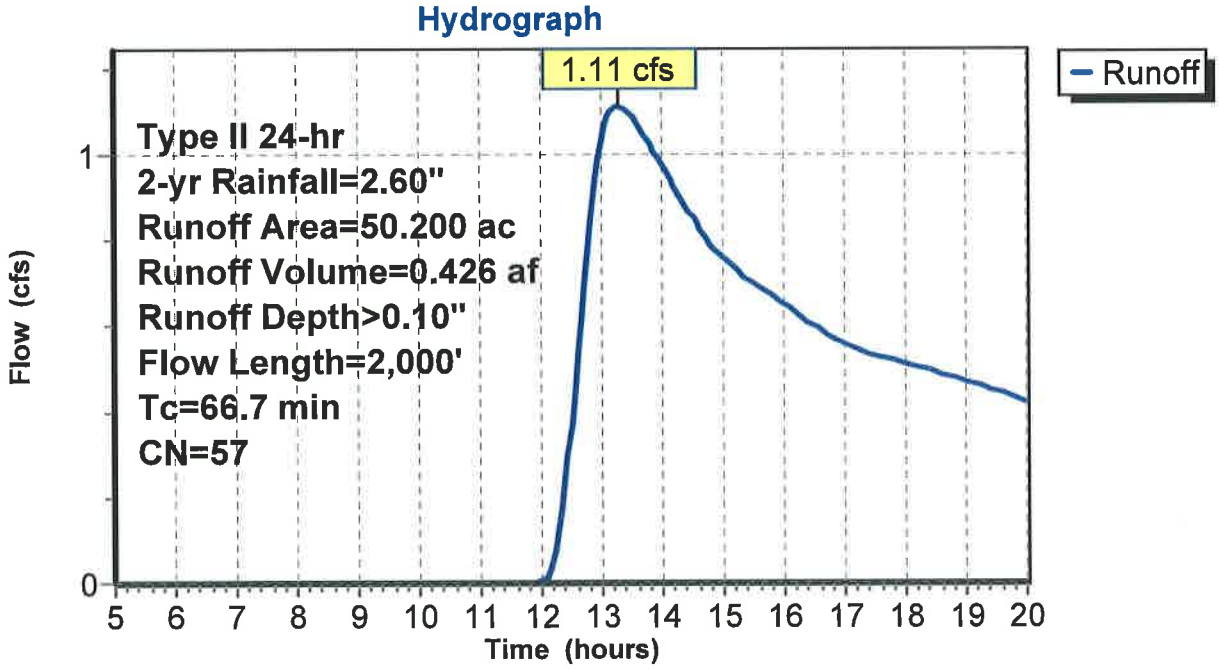
Runoff = 1.11 cfs @ 13.27 hrs, Volume= 0.426 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
30.100	49	Pasture/grassland/range, Fair, HSG A
20.100	69	Pasture/grassland/range, Fair, HSG B
50.200	57	Weighted Average
50.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 7S: NE



Summary for Reach 7R: SE ditch

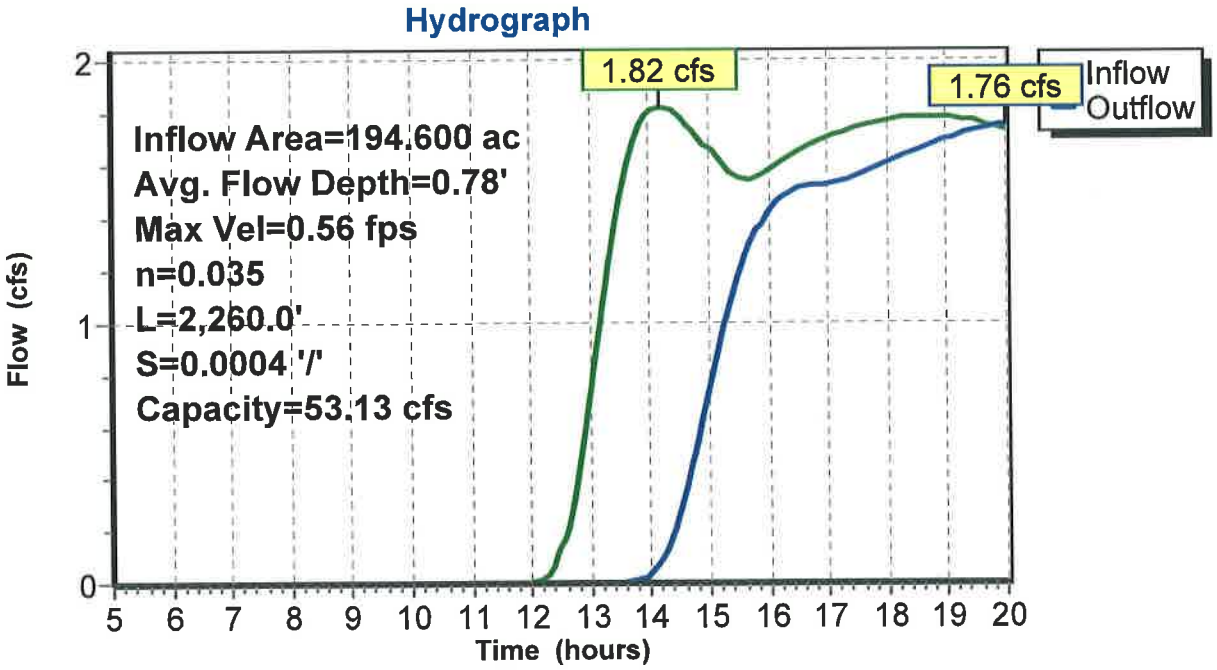
Inflow Area = 194.600 ac, 0.00% Impervious, Inflow Depth > 0.06" for 2-yr event
Inflow = 1.82 cfs @ 14.19 hrs, Volume= 0.987 af
Outflow = 1.76 cfs @ 20.00 hrs, Volume= 0.658 af, Atten= 4%, Lag= 348.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.56 fps, Min. Travel Time= 67.7 min
Avg. Velocity = 0.47 fps, Avg. Travel Time= 80.3 min

Peak Storage= 7,180 cf @ 19.50 hrs
Average Depth at Peak Storage= 0.78'
Bank-Full Depth= 3.50' Flow Area= 40.1 sf, Capacity= 53.13 cfs

2.00' x 3.50' deep channel, n= 0.035
Side Slope Z-value= 2.7 '/' Top Width= 20.90'
Length= 2,260.0' Slope= 0.0004 '/'
Inlet Invert= 1,196.40', Outlet Invert= 1,195.40'

Reach 7R: SE ditch



Summary for Pond 1P: NE ditch

Inflow Area = 97.400 ac, 0.00% Impervious, Inflow Depth > 0.10" for 2-yr event
Inflow = 2.16 cfs @ 13.27 hrs, Volume= 0.826 af
Outflow = 2.16 cfs @ 13.30 hrs, Volume= 0.824 af, Atten= 0%, Lag= 1.6 min
Primary = 2.16 cfs @ 13.30 hrs, Volume= 0.824 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,196.54' @ 13.30 hrs Surf.Area= 377 sf Storage= 167 cf

Plug-Flow detention time= 1.3 min calculated for 0.822 af (99% of inflow)
Center-of-Mass det. time= 0.8 min (939.5 - 938.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.65'	215,897 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

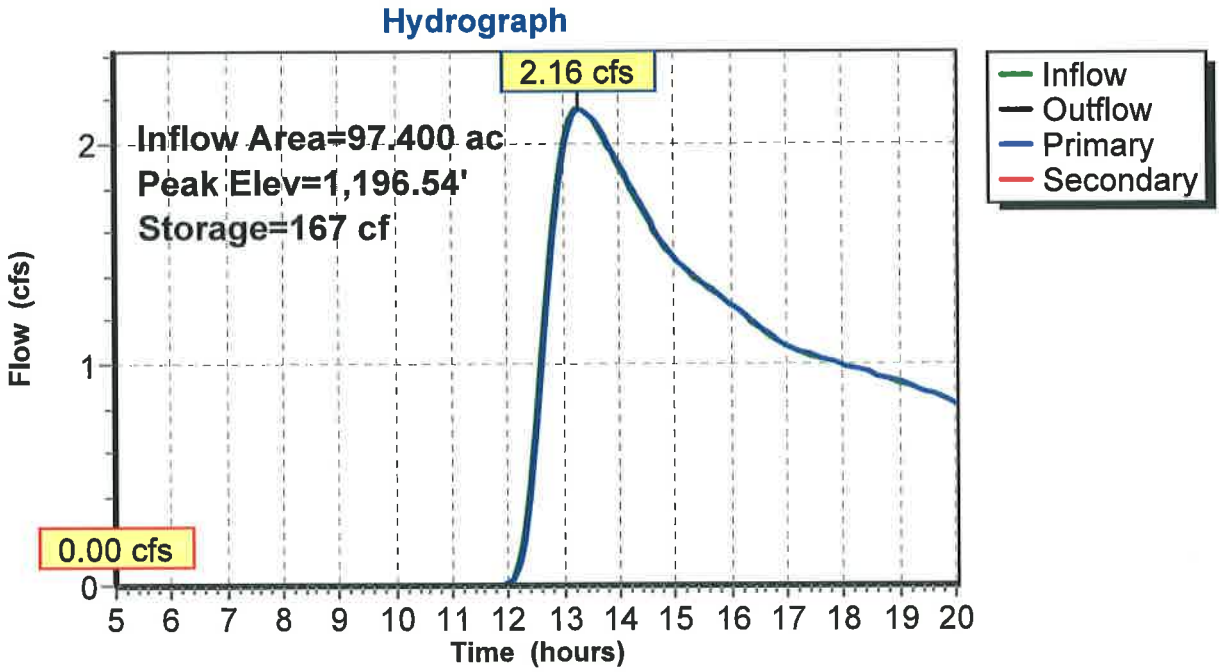
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.65	0	0	0
1,198.00	1,000	1,175	1,175
1,199.00	6,407	3,704	4,878
1,200.00	12,815	9,611	14,489
1,201.00	390,000	201,408	215,897

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.65'	**30.0" Round Culvert** L= 24.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.65' / 1,195.65' S= 0.0000 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,200.20'	**150.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=2.16 cfs @ 13.30 hrs HW=1,196.54' (Free Discharge)
1=Culvert (Barrel Controls 2.16 cfs @ 2.07 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.65' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1P: NE ditch



Summary for Pond 3P: S Central ditch

Inflow Area = 263.600 ac, 0.00% Impervious, Inflow Depth > 0.13" for 2-yr event
Inflow = 13.84 cfs @ 12.63 hrs, Volume= 2.938 af
Outflow = 11.44 cfs @ 12.90 hrs, Volume= 2.870 af, Atten= 17%, Lag= 16.1 min
Primary = 11.44 cfs @ 12.90 hrs, Volume= 2.870 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.40' @ 12.90 hrs Surf.Area= 11,280 sf Storage= 11,304 cf

Plug-Flow detention time= 15.9 min calculated for 2.870 af (98% of inflow)
Center-of-Mass det. time= 9.3 min (918.3 - 909.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.30'	74,844 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

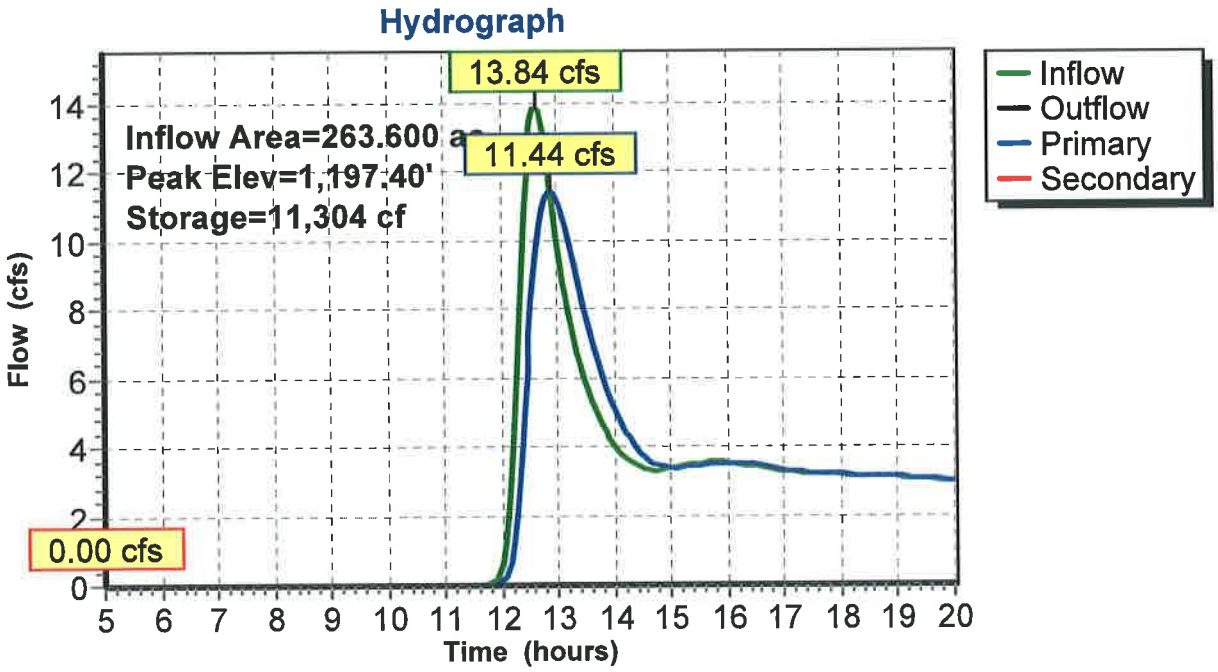
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.30	0	0	0
1,196.50	5,940	3,564	3,564
1,197.50	11,880	8,910	12,474
1,198.50	17,820	14,850	27,324
1,200.50	29,700	47,520	74,844

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.48'	**30.0" Round Culvert** L= 20.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.37' / 1,195.48' S= -0.0055 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,197.80'	**180.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.43 cfs @ 12.90 hrs HW=1,197.40' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 11.43 cfs @ 3.66 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.30' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: S Central ditch



Summary for Pond 4P: SW ditch

Inflow Area = 323.600 ac, 0.00% Impervious, Inflow Depth > 0.14" for 2-yr event
Inflow = 15.41 cfs @ 12.81 hrs, Volume= 3.895 af
Outflow = 15.32 cfs @ 12.87 hrs, Volume= 3.895 af, Atten= 1%, Lag= 3.6 min
Primary = 15.32 cfs @ 12.87 hrs, Volume= 3.895 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,194.80' @ 12.87 hrs Surf.Area= 4,396 sf Storage= 1,311 cf

Plug-Flow detention time= 0.4 min calculated for 3.895 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (910.8 - 910.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,194.20'	92,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

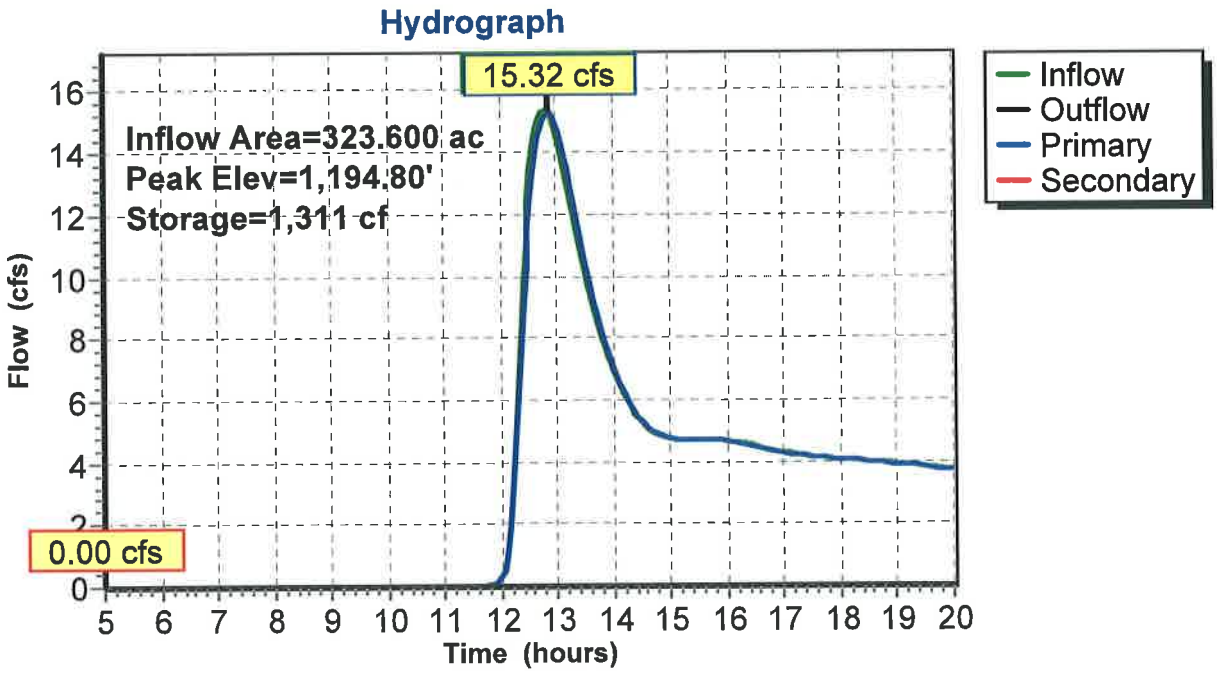
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,194.20	0	0	0
1,195.20	7,370	3,685	3,685
1,196.20	14,740	11,055	14,740
1,197.20	22,110	18,425	33,165
1,199.20	36,850	58,960	92,125

Device	Routing	Invert	Outlet Devices
#1	Primary	1,194.00'	**Special & User-Defined** Head (feet) 0.00 2.60 3.22 3.49 3.70 3.80 Disch. (cfs) 0.000 50.000 100.000 200.000 350.000 500.000
#2	Secondary	1,197.30'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=15.30 cfs @ 12.87 hrs HW=1,194.80' (Free Discharge)
↑—**1=Special & User-Defined** (Custom Controls 15.30 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,194.20' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: SW ditch



Summary for Pond 5P: C ditch

Inflow Area = 53.000 ac, 0.00% Impervious, Inflow Depth > 0.38" for 2-yr event
Inflow = 6.73 cfs @ 13.33 hrs, Volume= 1.690 af
Outflow = 6.73 cfs @ 13.33 hrs, Volume= 1.690 af, Atten= 0%, Lag= 0.1 min
Primary = 6.73 cfs @ 13.33 hrs, Volume= 1.690 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,187.87' @ 13.33 hrs Surf.Area= 51 sf Storage= 4 cf

Plug-Flow detention time= 0.0 min calculated for 1.690 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (898.9 - 898.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,187.70'	476,150 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

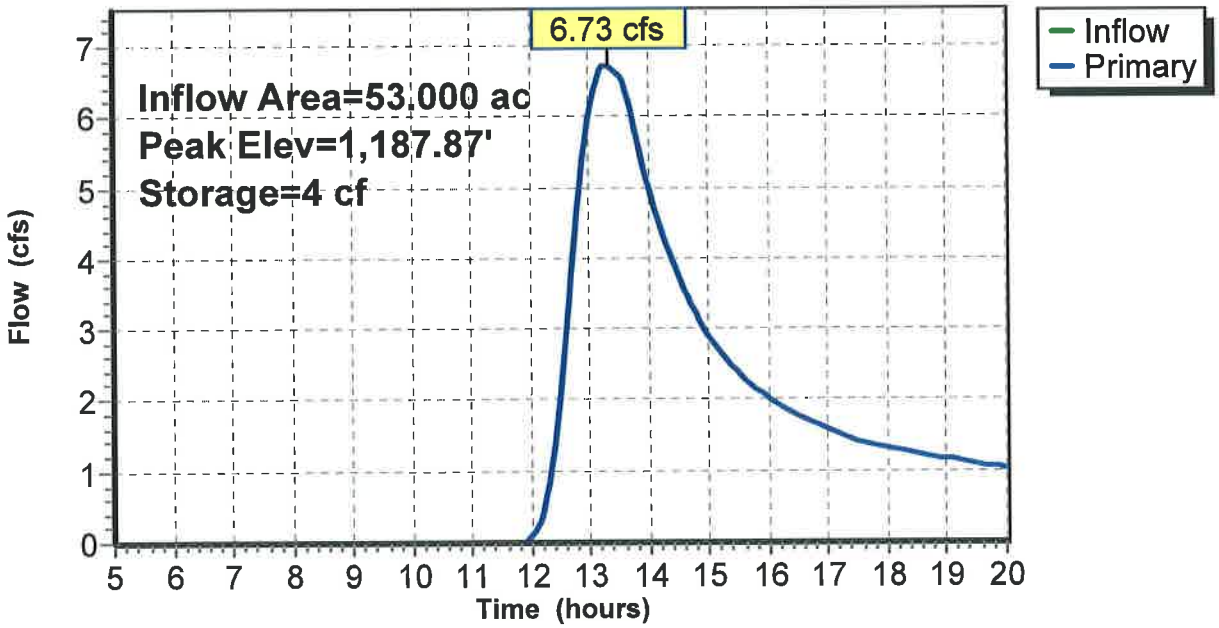
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,187.70	0	0	0
1,191.00	1,000	1,650	1,650
1,192.00	5,500	3,250	4,900
1,193.00	11,000	8,250	13,150
1,194.00	16,500	13,750	26,900
1,196.00	27,500	44,000	70,900
1,198.00	58,500	86,000	156,900
1,199.00	580,000	319,250	476,150

Device	Routing	Invert	Outlet Devices
#1	Primary	1,187.70'	**Ditch Flow** Head (feet) 0.00 1.00 2.00 3.00 4.00 Disch. (cfs) 0.000 40.000 133.000 300.000 550.000
#2	Primary	1,198.00'	**200.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=6.73 cfs @ 13.33 hrs HW=1,187.87' (Free Discharge)
1=Ditch Flow (Custom Controls 6.73 cfs)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 5P: C ditch

Hydrograph



Summary for Pond 6P: Road Ditch

Inflow Area = 97.300 ac, 0.00% Impervious, Inflow Depth > 0.10" for 2-yr event
Inflow = 1.82 cfs @ 14.19 hrs, Volume= 0.773 af
Outflow = 0.85 cfs @ 20.00 hrs, Volume= 0.214 af, Atten= 53%, Lag= 348.4 min
Primary = 0.85 cfs @ 20.00 hrs, Volume= 0.214 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,202.52' @ 20.00 hrs Surf.Area= 29,909 sf Storage= 24,328 cf

Plug-Flow detention time= 273.1 min calculated for 0.213 af (28% of inflow)
Center-of-Mass det. time= 134.9 min (1,099.2 - 964.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,200.00'	263,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

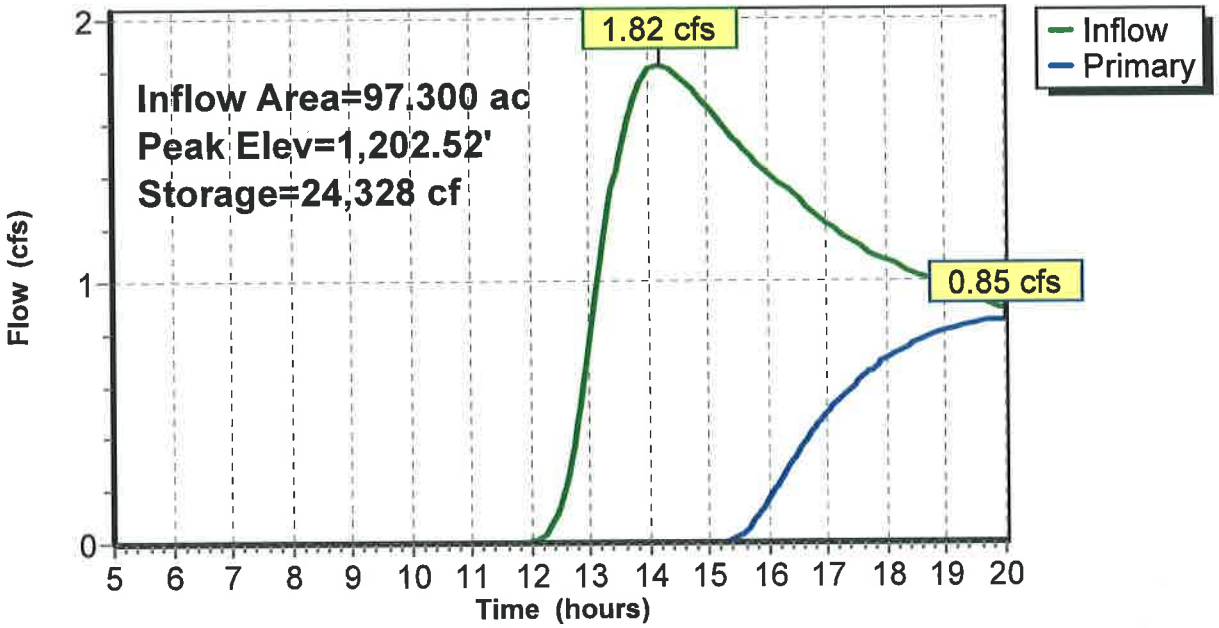
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,200.00	1,000	0	0
1,202.00	12,300	13,300	13,300
1,203.00	46,000	29,150	42,450
1,203.80	62,000	43,200	85,650
1,206.00	100,000	178,200	263,850

Device	Routing	Invert	Outlet Devices
#1	Primary	1,202.06'	**18.0" Round Culvert** L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,200.67' / 1,202.06' S= -0.0397 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf
#2	Primary	1,203.80'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.85 cfs @ 20.00 hrs HW=1,202.52' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.85 cfs @ 1.83 fps)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 6P: Road Ditch

Hydrograph



Summary for Subcatchment 1S: NE

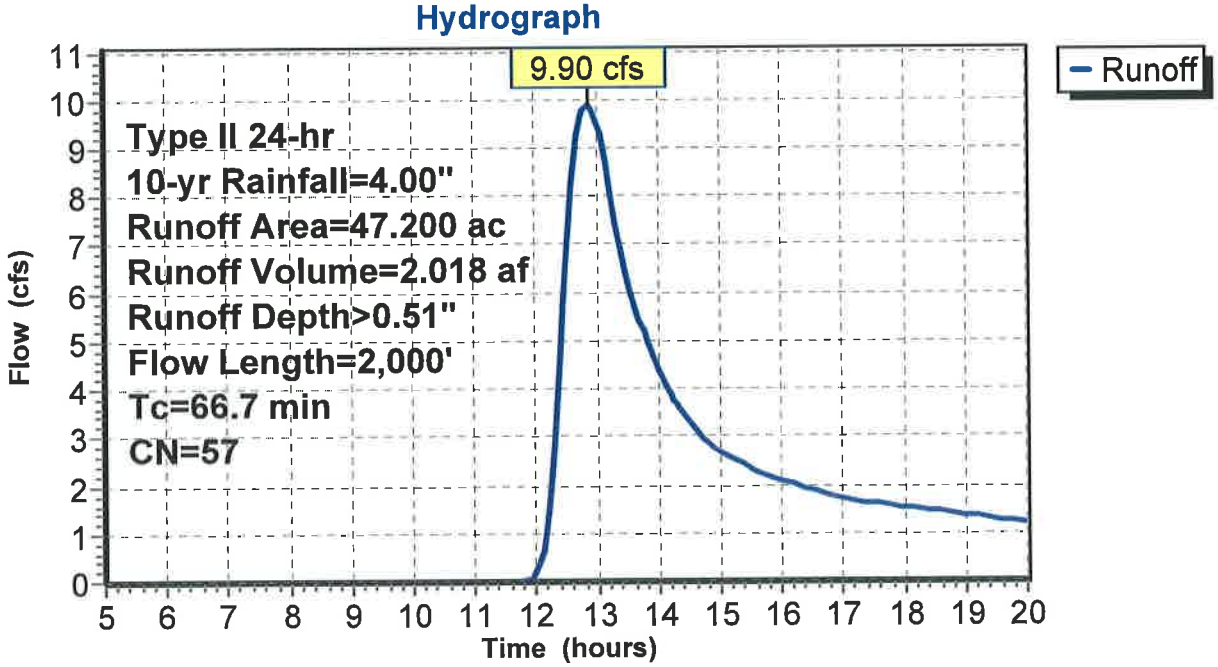
Runoff = 9.90 cfs @ 12.86 hrs, Volume= 2.018 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
28.300	49	Pasture/grassland/range, Fair, HSG A
18.900	69	Pasture/grassland/range, Fair, HSG B
47.200	57	Weighted Average
47.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 1S: NE



Summary for Subcatchment 2S: SE

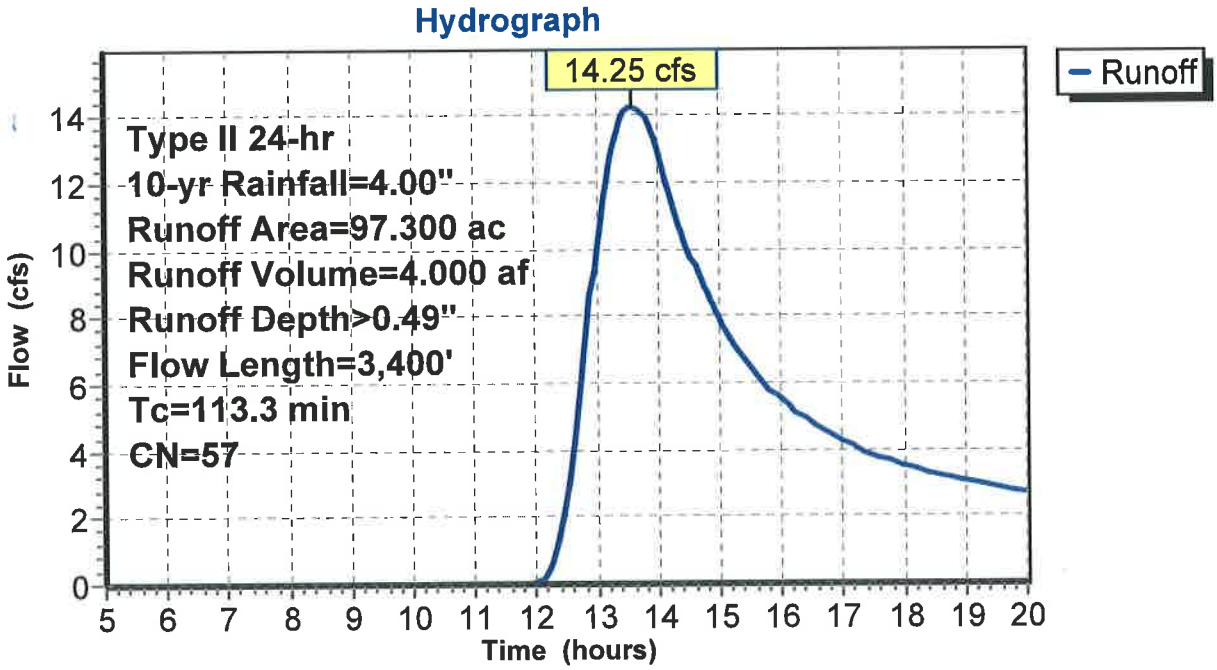
Runoff = 14.25 cfs @ 13.59 hrs, Volume= 4.000 af, Depth> 0.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
58.400	49	Pasture/grassland/range, Fair, HSG A
38.900	69	Pasture/grassland/range, Fair, HSG B
97.300	57	Weighted Average
97.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 2S: SE



Summary for Subcatchment 3S: S Central

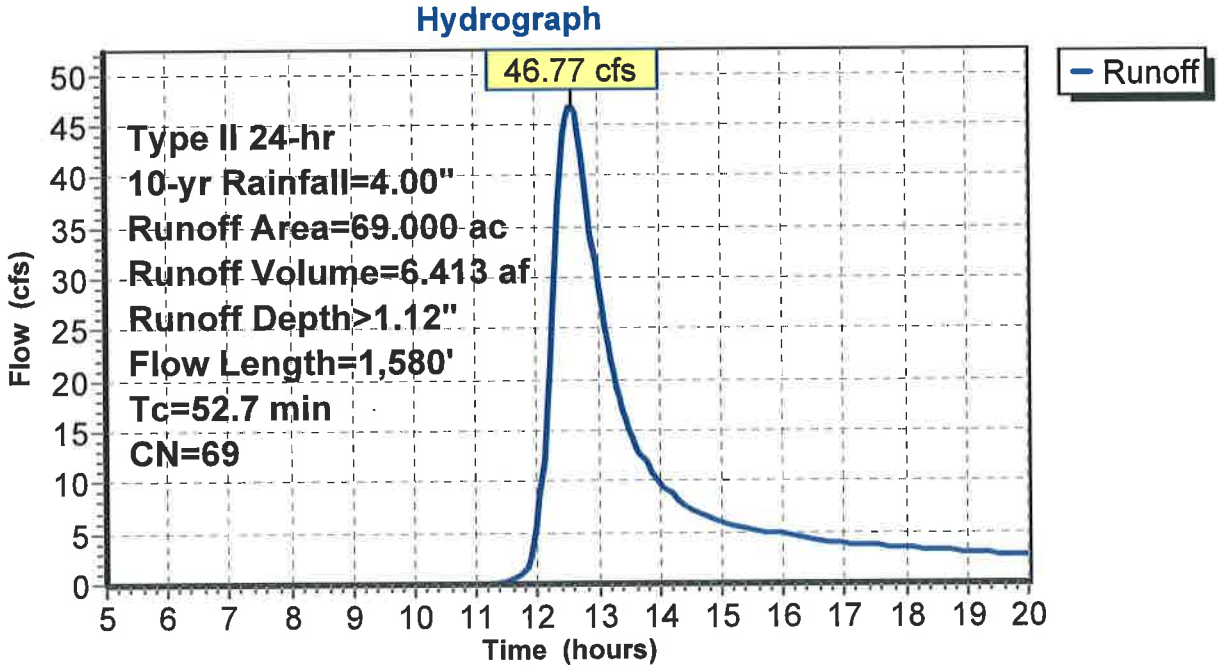
Runoff = 46.77 cfs @ 12.58 hrs, Volume= 6.413 af, Depth> 1.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
69.000	69	Pasture/grassland/range, Fair, HSG B
69.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.7	1,580		0.50		**Direct Entry,**

Subcatchment 3S: S Central



Summary for Subcatchment 4S: SW

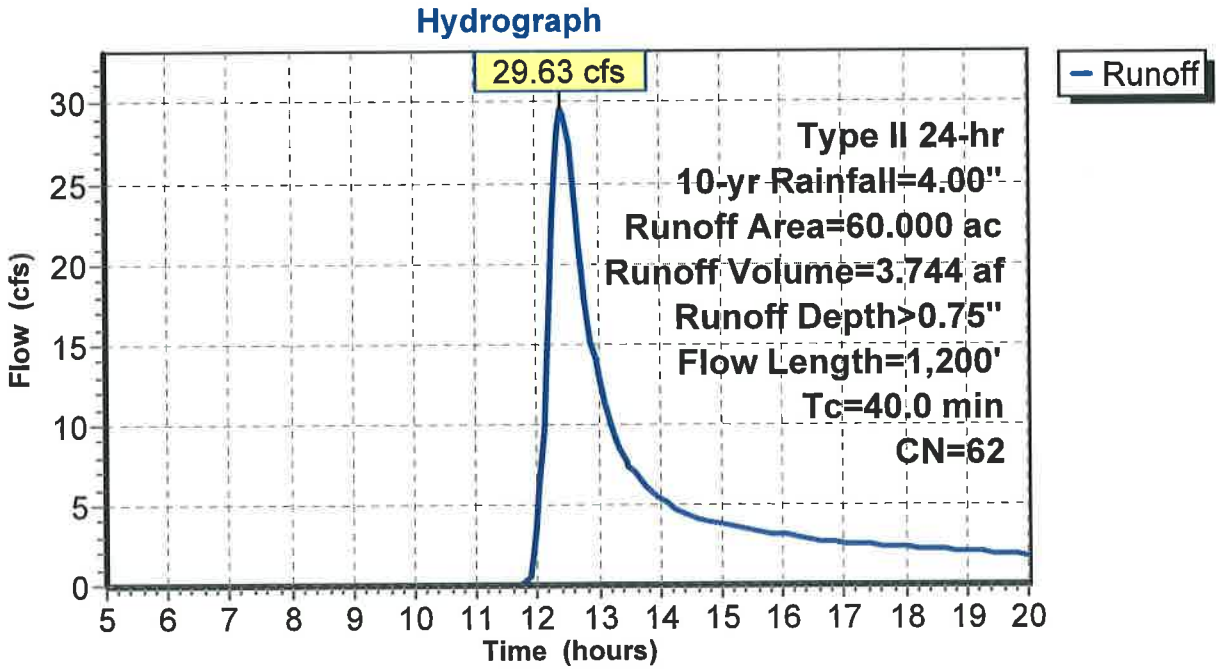
Runoff = 29.63 cfs @ 12.43 hrs, Volume= 3.744 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
20.000	49	Pasture/grassland/range, Fair, HSG A
40.000	69	Pasture/grassland/range, Fair, HSG B
60.000	62	Weighted Average
60.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	1,200		0.50		**Direct Entry,**

Subcatchment 4S: SW



Summary for Subcatchment 5S: S Central

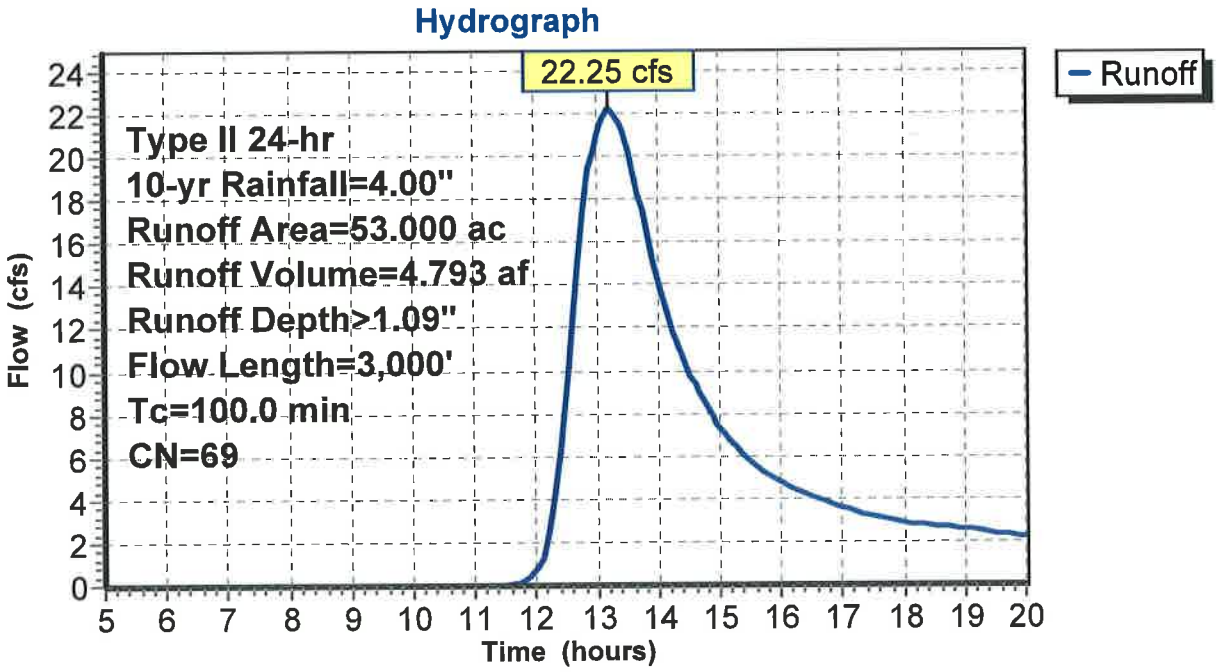
Runoff = 22.25 cfs @ 13.22 hrs, Volume= 4.793 af, Depth> 1.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
53.000	69	Pasture/grassland/range, Fair, HSG B
53.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
100.0	3,000		0.50		**Direct Entry,**

Subcatchment 5S: S Central



Summary for Subcatchment 6S: SE

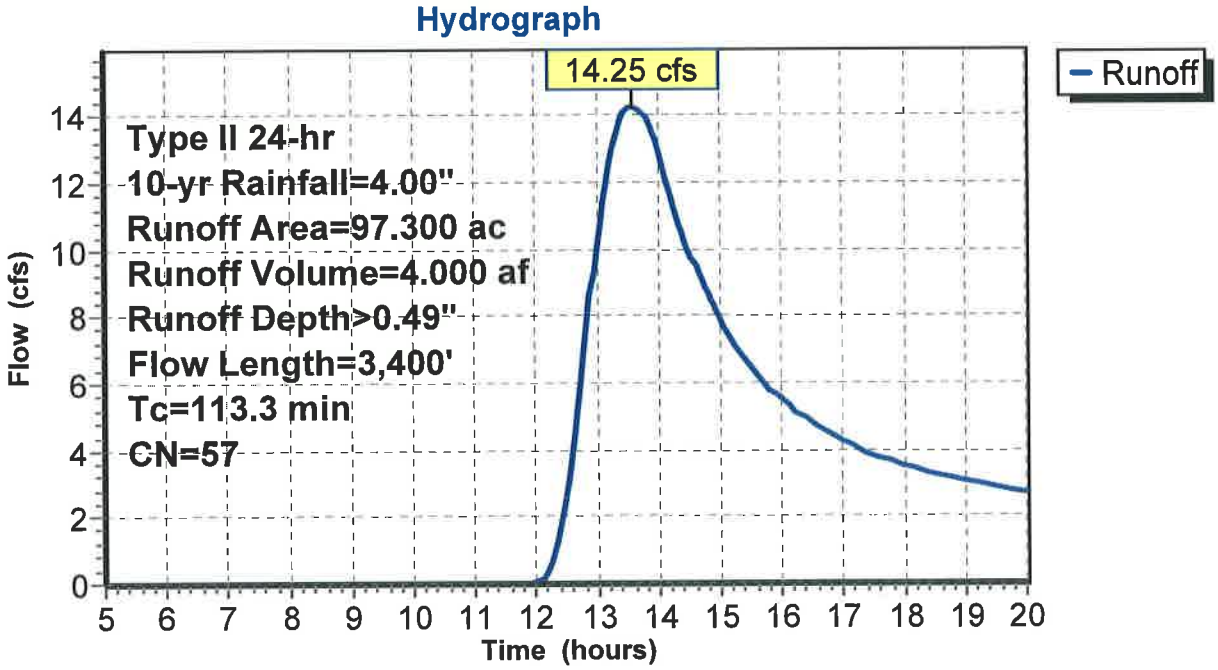
Runoff = 14.25 cfs @ 13.59 hrs, Volume= 4.000 af, Depth> 0.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
58.400	49	Pasture/grassland/range, Fair, HSG A
38.900	69	Pasture/grassland/range, Fair, HSG B
97.300	57	Weighted Average
97.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 6S: SE



Summary for Subcatchment 7S: NE

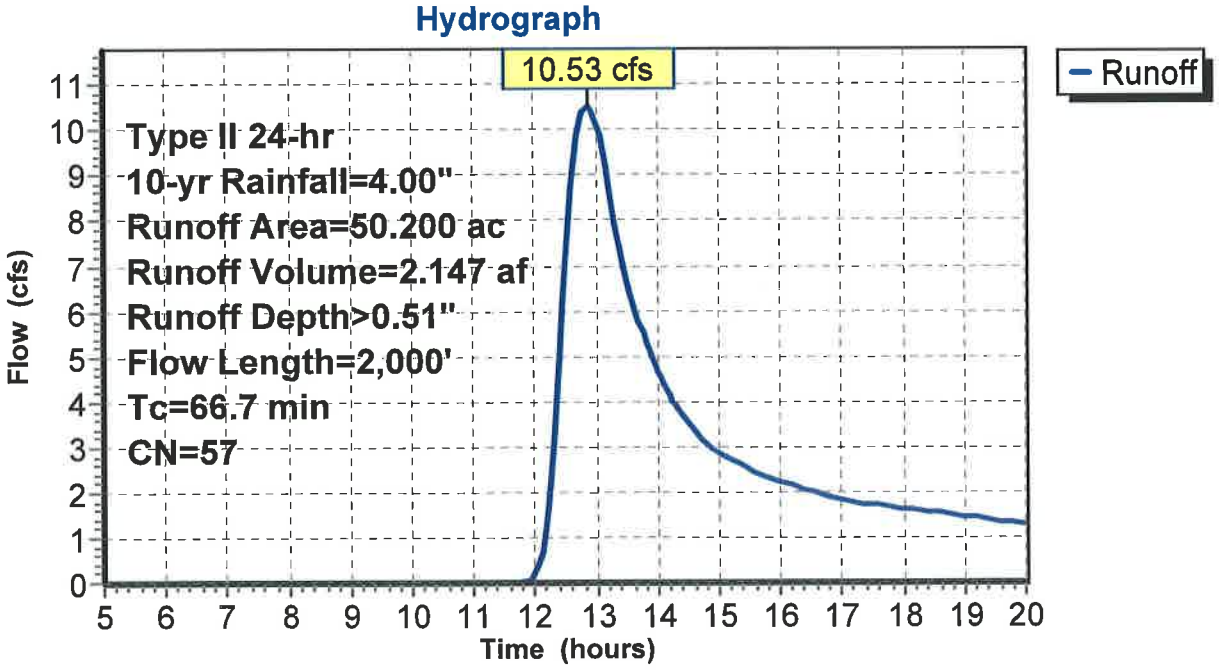
Runoff = 10.53 cfs @ 12.86 hrs, Volume= 2.147 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
30.100	49	Pasture/grassland/range, Fair, HSG A
20.100	69	Pasture/grassland/range, Fair, HSG B
50.200	57	Weighted Average
50.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 7S: NE



Summary for Reach 7R: SE ditch

Inflow Area = 194.600 ac, 0.00% Impervious, Inflow Depth > 0.42" for 10-yr event
Inflow = 17.45 cfs @ 13.85 hrs, Volume= 6.812 af
Outflow = 15.39 cfs @ 15.13 hrs, Volume= 5.930 af, Atten= 12%, Lag= 76.9 min

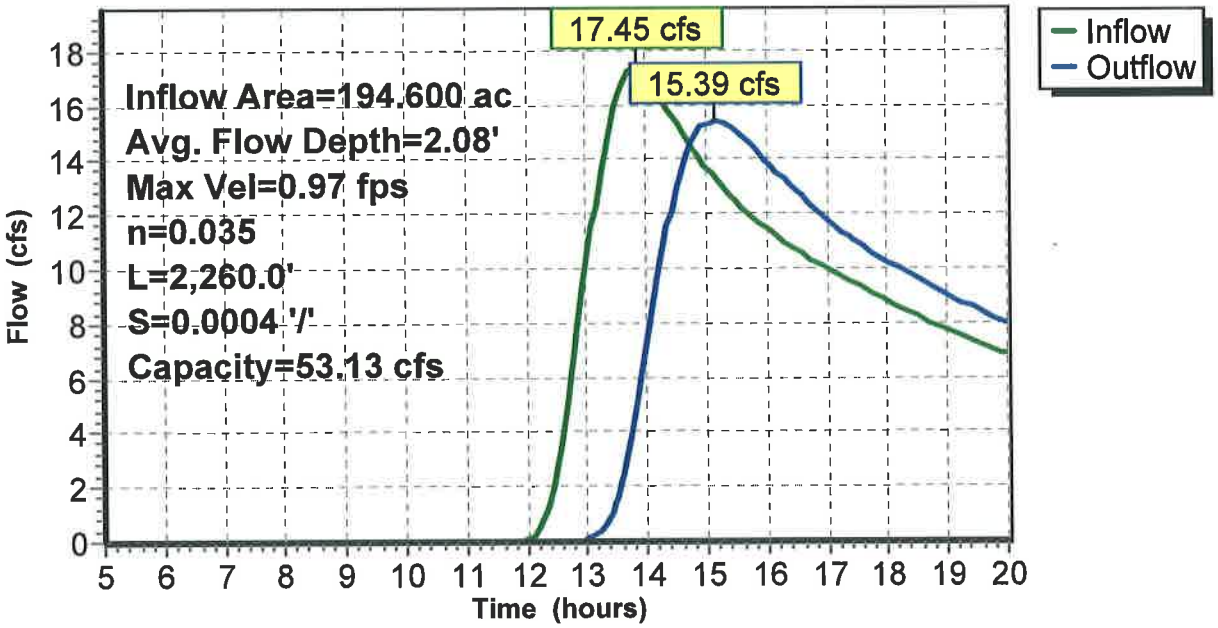
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.97 fps, Min. Travel Time= 38.8 min
Avg. Velocity = 0.80 fps, Avg. Travel Time= 47.3 min

Peak Storage= 35,827 cf @ 14.49 hrs
Average Depth at Peak Storage= 2.08'
Bank-Full Depth= 3.50' Flow Area= 40.1 sf, Capacity= 53.13 cfs

2.00' x 3.50' deep channel, n= 0.035
Side Slope Z-value= 2.7 '/' Top Width= 20.90'
Length= 2,260.0' Slope= 0.0004 '/'
Inlet Invert= 1,196.40', Outlet Invert= 1,195.40'

Reach 7R: SE ditch

Hydrograph



Summary for Pond 1P: NE ditch

Inflow Area = 97.400 ac, 0.00% Impervious, Inflow Depth > 0.51" for 10-yr event
Inflow = 20.42 cfs @ 12.86 hrs, Volume= 4.165 af
Outflow = 19.96 cfs @ 12.98 hrs, Volume= 4.161 af, Atten= 2%, Lag= 6.9 min
Primary = 19.96 cfs @ 12.98 hrs, Volume= 4.161 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,198.59' @ 12.98 hrs Surf.Area= 4,179 sf Storage= 2,698 cf

Plug-Flow detention time= 1.5 min calculated for 4.147 af (100% of inflow)
Center-of-Mass det. time= 1.1 min (884.3 - 883.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.65'	215,897 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

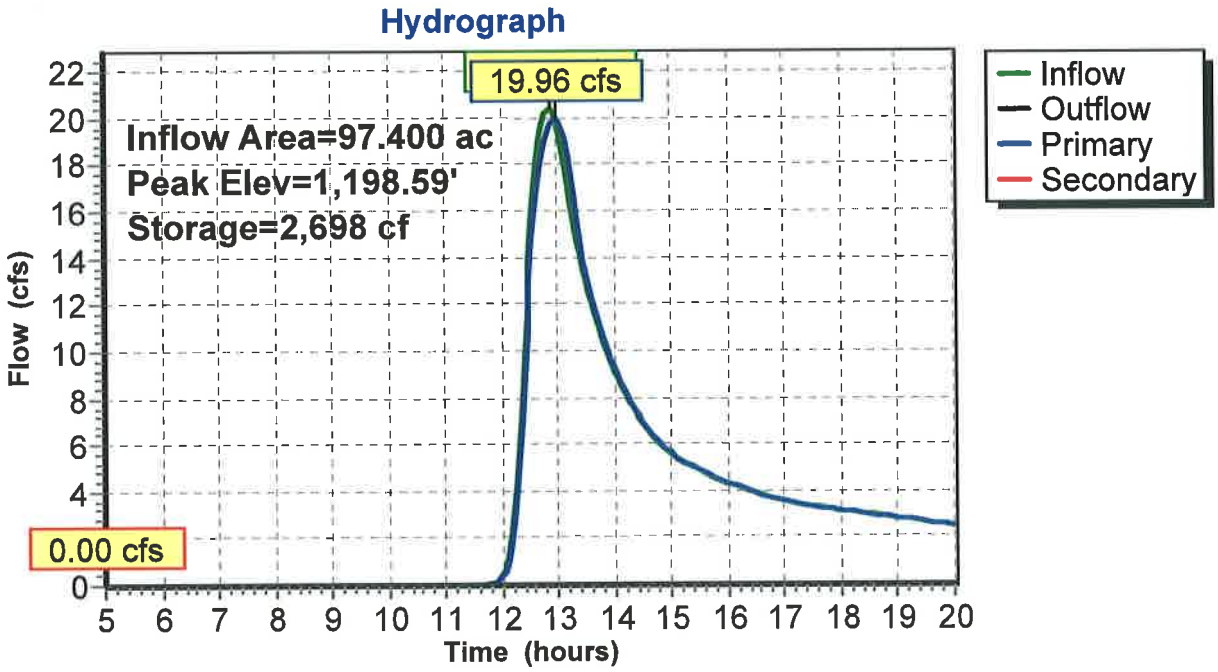
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.65	0	0	0
1,198.00	1,000	1,175	1,175
1,199.00	6,407	3,704	4,878
1,200.00	12,815	9,611	14,489
1,201.00	390,000	201,408	215,897

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.65'	**30.0" Round Culvert** L= 24.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.65' / 1,195.65' S= 0.0000 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,200.20'	**150.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=19.94 cfs @ 12.98 hrs HW=1,198.59' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 19.94 cfs @ 4.36 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.65' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: NE ditch



Summary for Pond 3P: S Central ditch

Inflow Area = 263.600 ac, 0.00% Impervious, Inflow Depth > 0.56" for 10-yr event
Inflow = 46.77 cfs @ 12.58 hrs, Volume= 12.343 af
Outflow = 46.73 cfs @ 12.59 hrs, Volume= 12.094 af, Atten= 0%, Lag= 0.7 min
Primary = 17.06 cfs @ 12.59 hrs, Volume= 9.718 af
Secondary = 29.67 cfs @ 12.59 hrs, Volume= 2.376 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.96' @ 12.59 hrs Surf.Area= 14,586 sf Storage= 18,502 cf

Plug-Flow detention time= 13.8 min calculated for 12.054 af (98% of inflow)
Center-of-Mass det. time= 8.2 min (926.5 - 918.3)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.30'	74,844 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.30	0	0	0
1,196.50	5,940	3,564	3,564
1,197.50	11,880	8,910	12,474
1,198.50	17,820	14,850	27,324
1,200.50	29,700	47,520	74,844

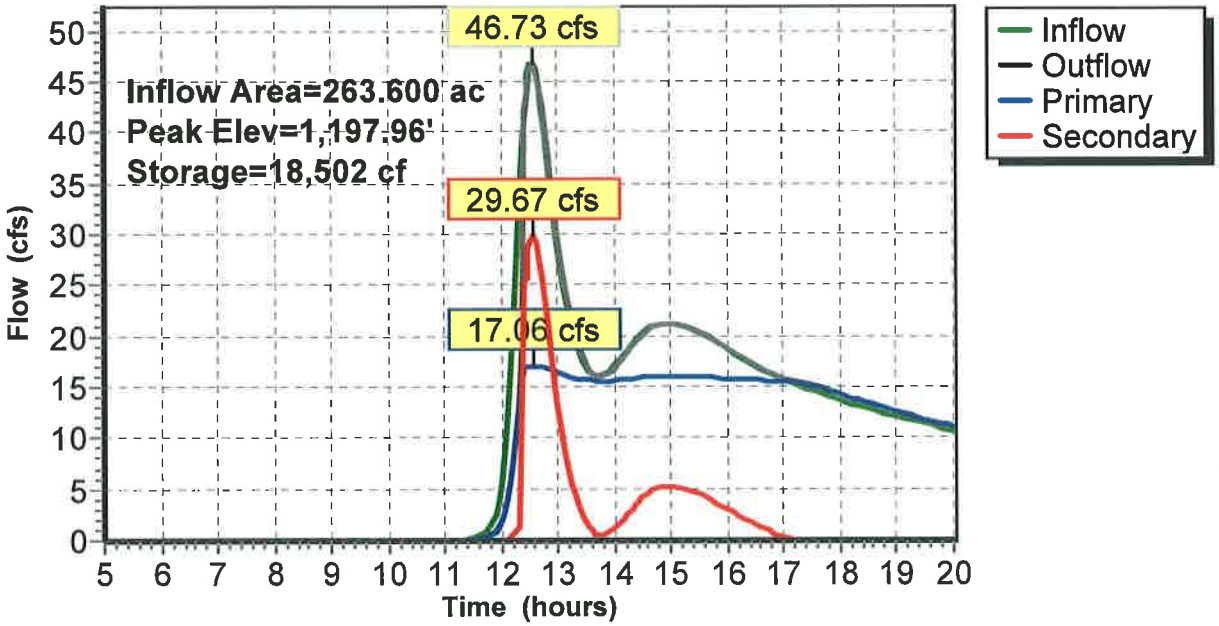
Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.48'	**30.0" Round Culvert** L= 20.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.37' / 1,195.48' S= -0.0055 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,197.80'	**180.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=17.06 cfs @ 12.59 hrs HW=1,197.96' (Free Discharge)
↑**1=Culvert** (Barrel Controls 17.06 cfs @ 4.18 fps)

Secondary OutFlow Max=29.52 cfs @ 12.59 hrs HW=1,197.96' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 29.52 cfs @ 1.06 fps)

Pond 3P: S Central ditch

Hydrograph



Summary for Pond 4P: SW ditch

Inflow Area = 323.600 ac, 0.00% Impervious, Inflow Depth > 0.59" for 10-yr event
Inflow = 74.44 cfs @ 12.52 hrs, Volume= 15.838 af
Outflow = 70.21 cfs @ 12.64 hrs, Volume= 15.820 af, Atten= 6%, Lag= 7.6 min
Primary = 70.21 cfs @ 12.64 hrs, Volume= 15.820 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,196.85' @ 12.64 hrs Surf.Area= 19,535 sf Storage= 25,889 cf

Plug-Flow detention time= 3.4 min calculated for 15.767 af (100% of inflow)
Center-of-Mass det. time= 3.0 min (911.6 - 908.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,194.20'	92,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

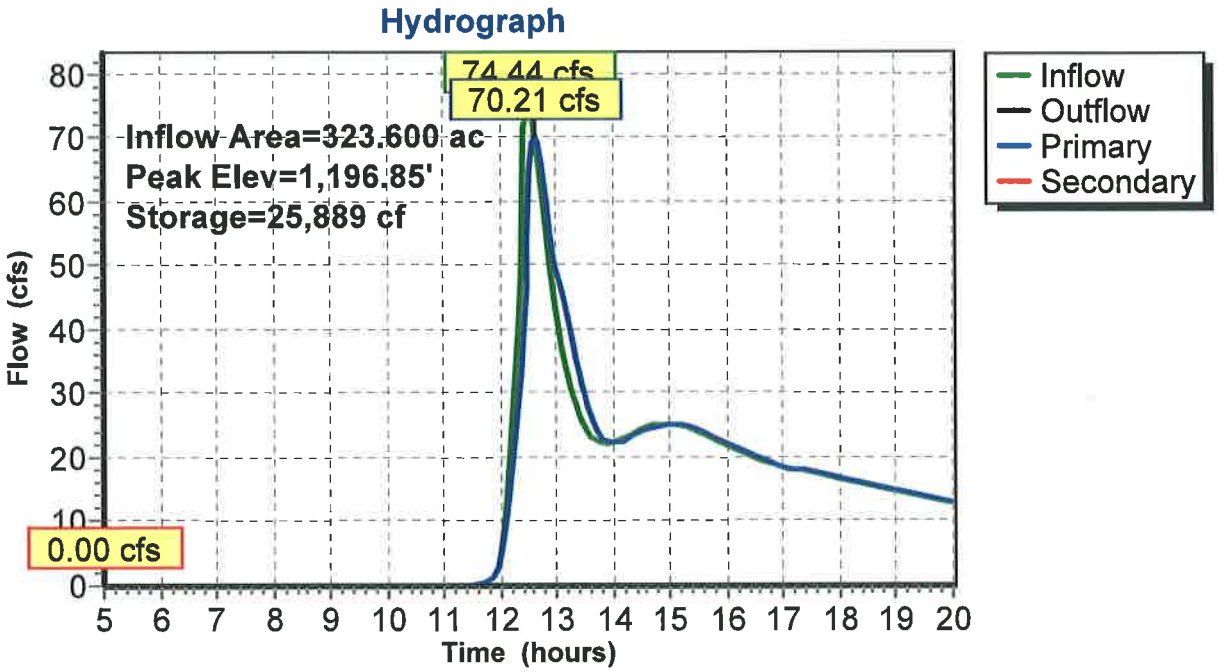
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,194.20	0	0	0
1,195.20	7,370	3,685	3,685
1,196.20	14,740	11,055	14,740
1,197.20	22,110	18,425	33,165
1,199.20	36,850	58,960	92,125

Device	Routing	Invert	Outlet Devices
#1	Primary	1,194.00'	**Special & User-Defined** Head (feet) 0.00 2.60 3.22 3.49 3.70 3.80 Disch. (cfs) 0.000 50.000 100.000 200.000 350.000 500.000
#2	Secondary	1,197.30'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=70.07 cfs @ 12.64 hrs HW=1,196.85' (Free Discharge)
↑**1=Special & User-Defined** (Custom Controls 70.07 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,194.20' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: SW ditch



Summary for Pond 5P: C ditch

Inflow Area = 53.000 ac, 0.00% Impervious, Inflow Depth > 1.09" for 10-yr event
Inflow = 22.25 cfs @ 13.22 hrs, Volume= 4.793 af
Outflow = 22.25 cfs @ 13.23 hrs, Volume= 4.793 af, Atten= 0%, Lag= 0.3 min
Primary = 22.25 cfs @ 13.23 hrs, Volume= 4.793 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,188.26' @ 13.23 hrs Surf.Area= 169 sf Storage= 47 cf

Plug-Flow detention time= 0.0 min calculated for 4.793 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (878.2 - 878.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,187.70'	476,150 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

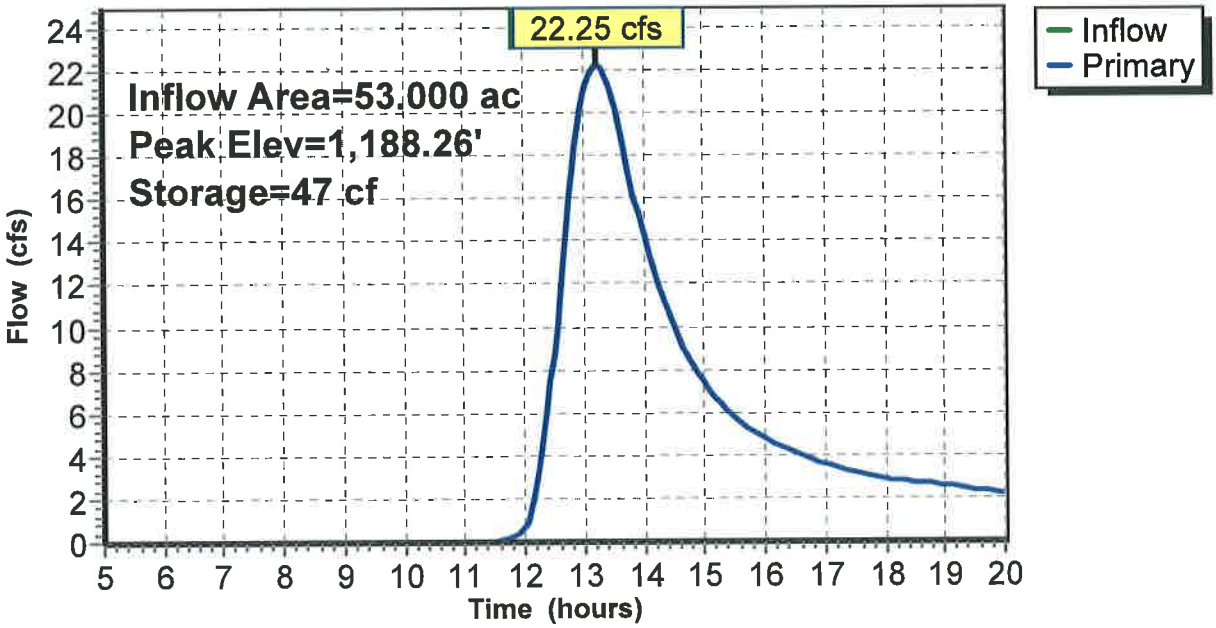
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,187.70	0	0	0
1,191.00	1,000	1,650	1,650
1,192.00	5,500	3,250	4,900
1,193.00	11,000	8,250	13,150
1,194.00	16,500	13,750	26,900
1,196.00	27,500	44,000	70,900
1,198.00	58,500	86,000	156,900
1,199.00	580,000	319,250	476,150

Device	Routing	Invert	Outlet Devices
#1	Primary	1,187.70'	**Ditch Flow** Head (feet) 0.00 1.00 2.00 3.00 4.00 Disch. (cfs) 0.000 40.000 133.000 300.000 550.000
#2	Primary	1,198.00'	**200.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=22.23 cfs @ 13.23 hrs HW=1,188.26' (Free Discharge)
↑—**1=Ditch Flow** (Custom Controls 22.23 cfs)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 5P: C ditch

Hydrograph



Summary for Pond 6P: Road Ditch

Inflow Area = 97.300 ac, 0.00% Impervious, Inflow Depth > 0.49" for 10-yr event
Inflow = 14.25 cfs @ 13.59 hrs, Volume= 4.000 af
Outflow = 5.95 cfs @ 15.75 hrs, Volume= 2.812 af, Atten= 58%, Lag= 129.6 min
Primary = 5.95 cfs @ 15.75 hrs, Volume= 2.812 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,203.59' @ 15.75 hrs Surf.Area= 57,868 sf Storage= 73,269 cf

Plug-Flow detention time= 154.1 min calculated for 2.812 af (70% of inflow)
Center-of-Mass det. time= 88.1 min (1,002.2 - 914.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,200.00'	263,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

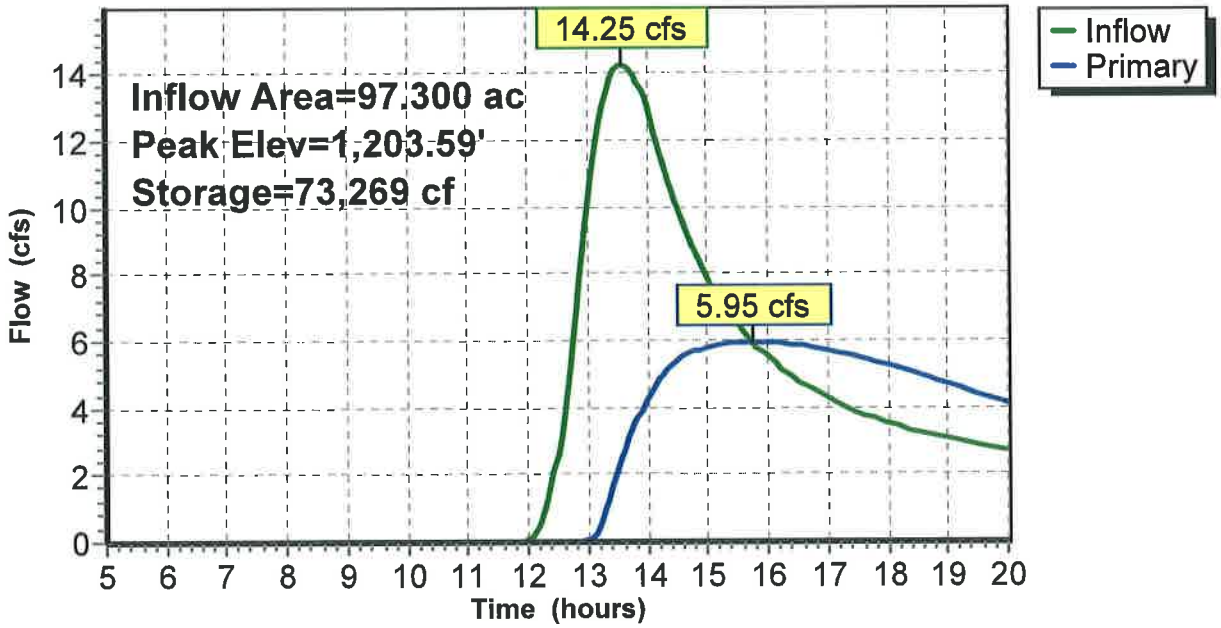
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,200.00	1,000	0	0
1,202.00	12,300	13,300	13,300
1,203.00	46,000	29,150	42,450
1,203.80	62,000	43,200	85,650
1,206.00	100,000	178,200	263,850

Device	Routing	Invert	Outlet Devices
#1	Primary	1,202.06'	**18.0" Round Culvert** L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,200.67' / 1,202.06' S= -0.0397 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf
#2	Primary	1,203.80'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=5.95 cfs @ 15.75 hrs HW=1,203.59' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.95 cfs @ 3.36 fps)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 6P: Road Ditch

Hydrograph



Summary for Subcatchment 1S: NE

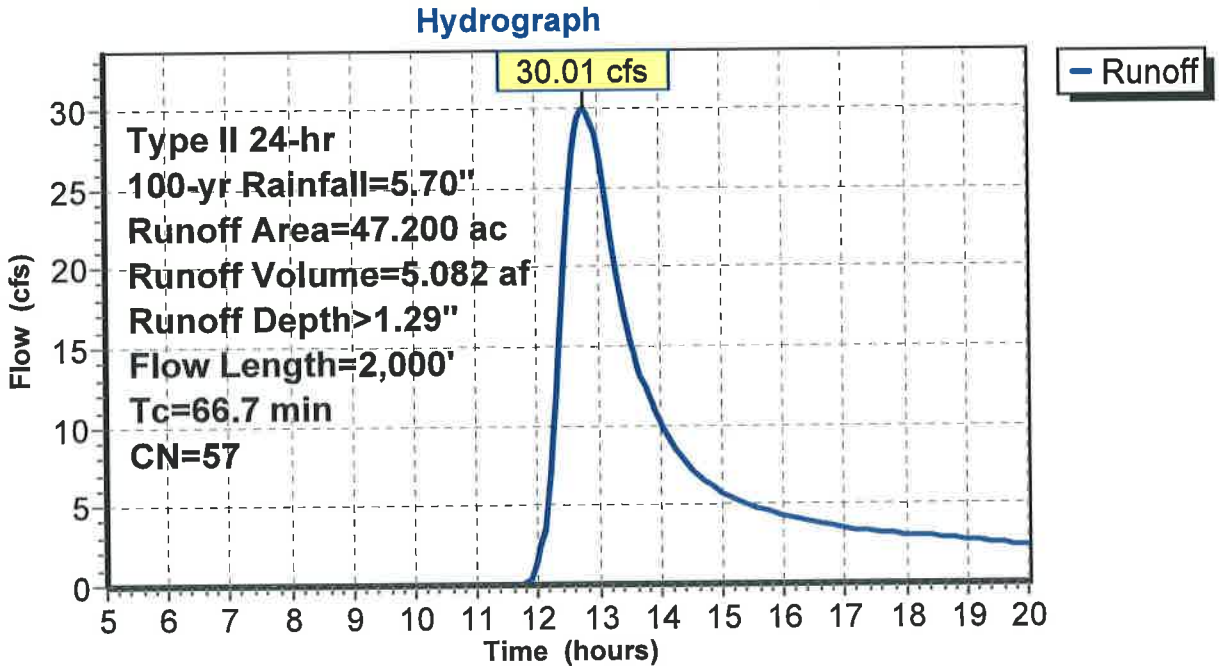
Runoff = 30.01 cfs @ 12.80 hrs, Volume= 5.082 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
28.300	49	Pasture/grassland/range, Fair, HSG A
18.900	69	Pasture/grassland/range, Fair, HSG B
47.200	57	Weighted Average
47.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 1S: NE



Summary for Subcatchment 2S: SE

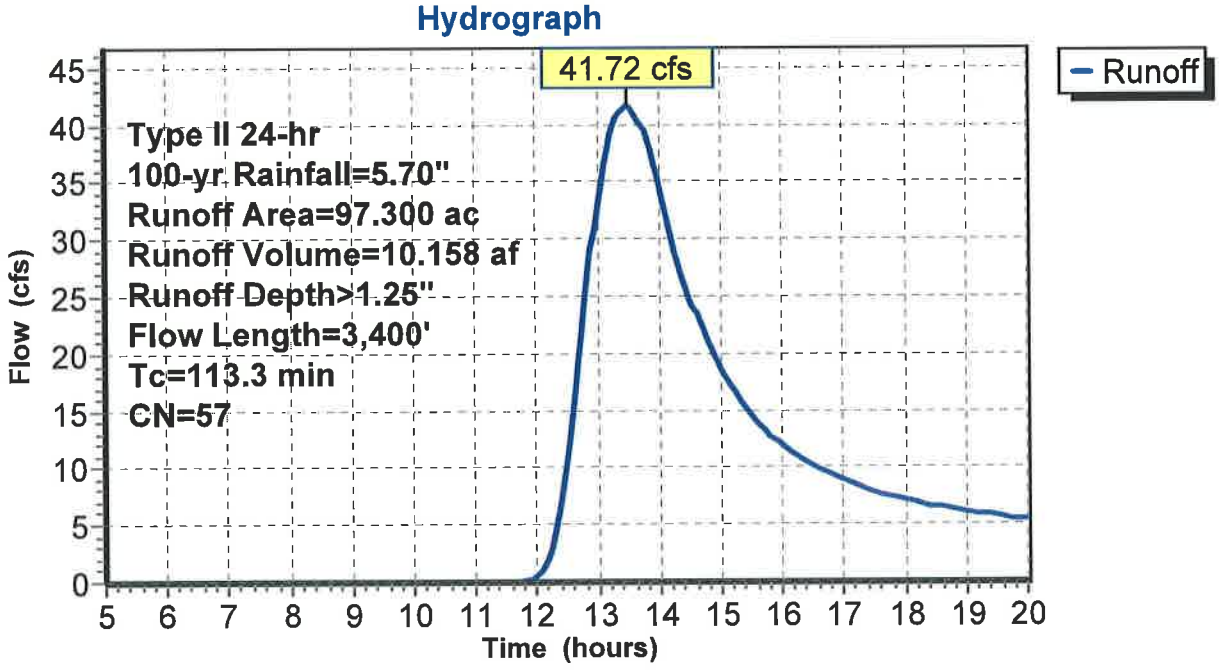
Runoff = 41.72 cfs @ 13.47 hrs, Volume= 10.158 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
58.400	49	Pasture/grassland/range, Fair, HSG A
38.900	69	Pasture/grassland/range, Fair, HSG B
97.300	57	Weighted Average
97.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 2S: SE



Summary for Subcatchment 3S: S Central

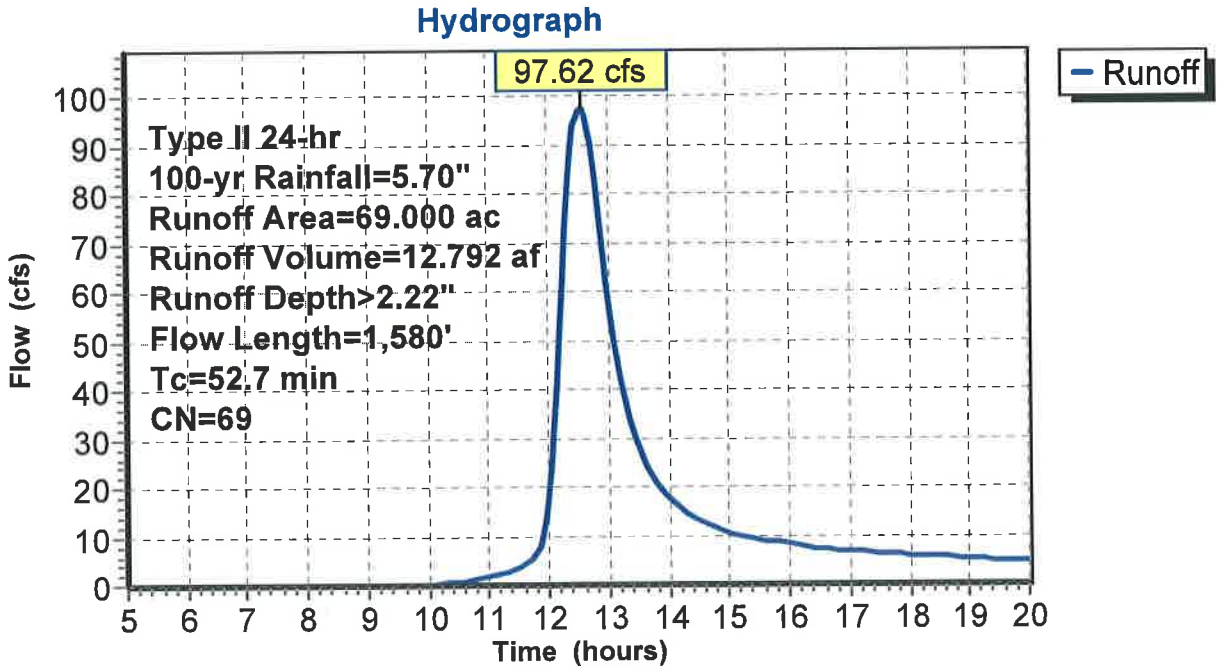
Runoff = 97.62 cfs @ 12.55 hrs, Volume= 12.792 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
69.000	69	Pasture/grassland/range, Fair, HSG B
69.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.7	1,580		0.50		**Direct Entry,**

Subcatchment 3S: S Central



Summary for Subcatchment 4S: SW

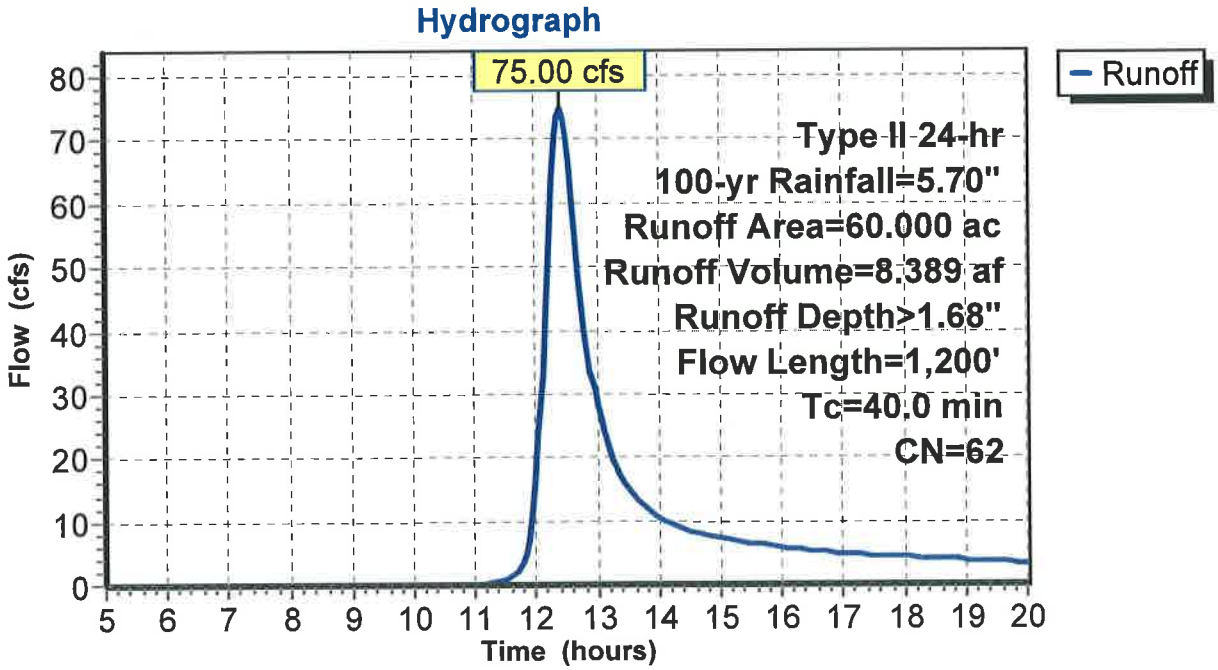
Runoff = 75.00 cfs @ 12.40 hrs, Volume= 8.389 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
20.000	49	Pasture/grassland/range, Fair, HSG A
40.000	69	Pasture/grassland/range, Fair, HSG B
60.000	62	Weighted Average
60.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	1,200		0.50		**Direct Entry,**

Subcatchment 4S: SW



Summary for Subcatchment 5S: S Central

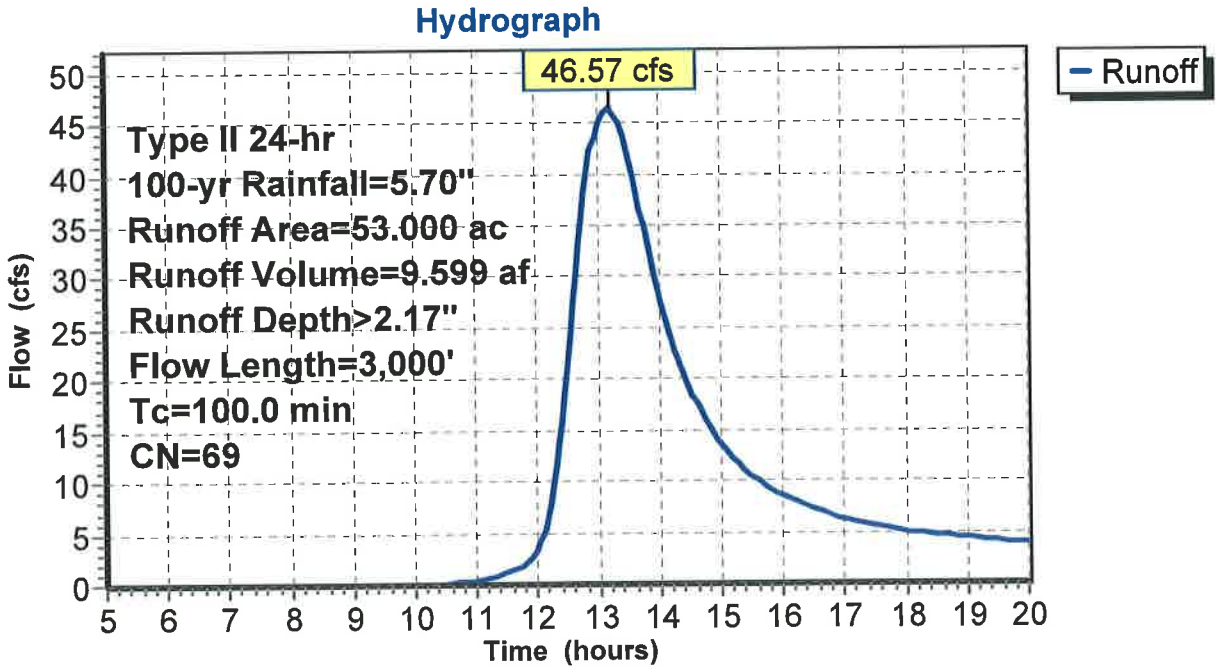
Runoff = 46.57 cfs @ 13.20 hrs, Volume= 9.599 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
53.000	69	Pasture/grassland/range, Fair, HSG B
53.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
100.0	3,000		0.50		**Direct Entry,**

Subcatchment 5S: S Central



Summary for Subcatchment 6S: SE

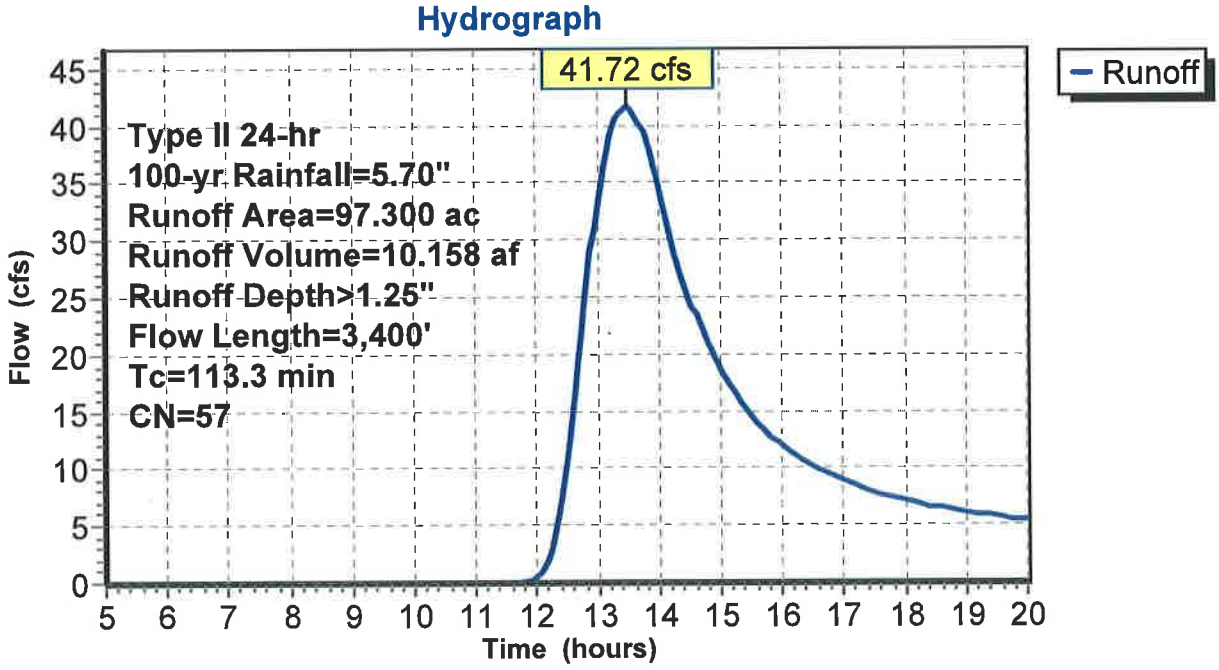
Runoff = 41.72 cfs @ 13.47 hrs, Volume= 10.158 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
58.400	49	Pasture/grassland/range, Fair, HSG A
38.900	69	Pasture/grassland/range, Fair, HSG B
97.300	57	Weighted Average
97.300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 6S: SE



Summary for Subcatchment 7S: NE

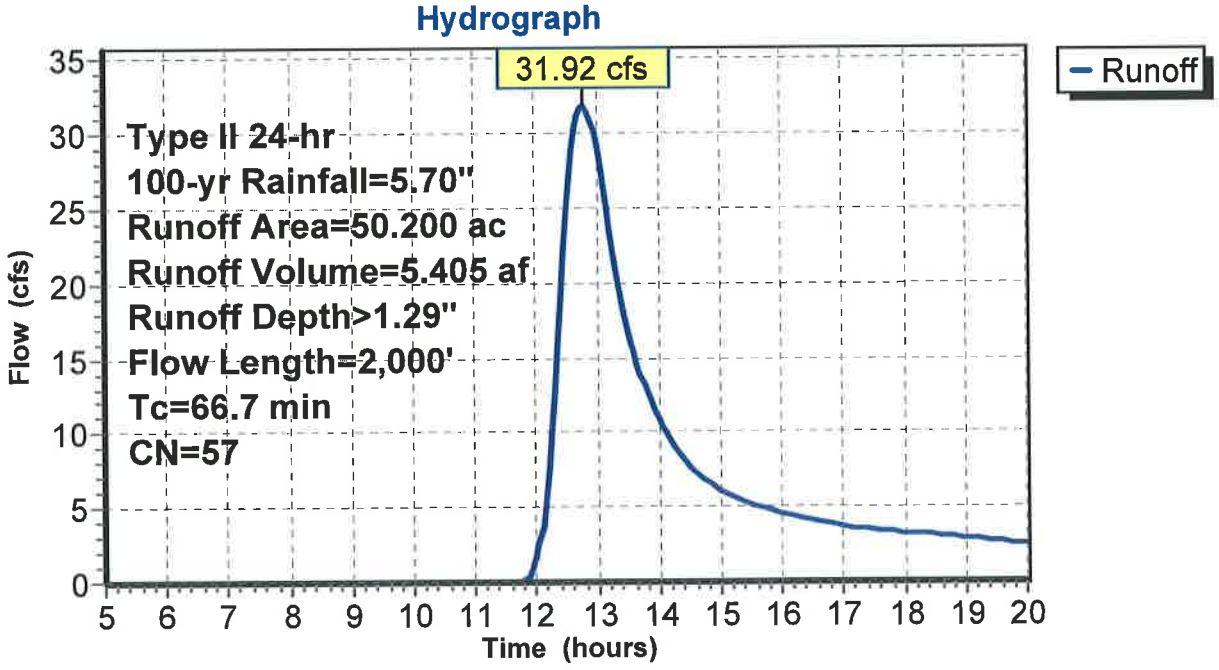
Runoff = 31.92 cfs @ 12.80 hrs, Volume= 5.405 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
30.100	49	Pasture/grassland/range, Fair, HSG A
20.100	69	Pasture/grassland/range, Fair, HSG B
50.200	57	Weighted Average
50.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 7S: NE



Summary for Reach 7R: SE ditch

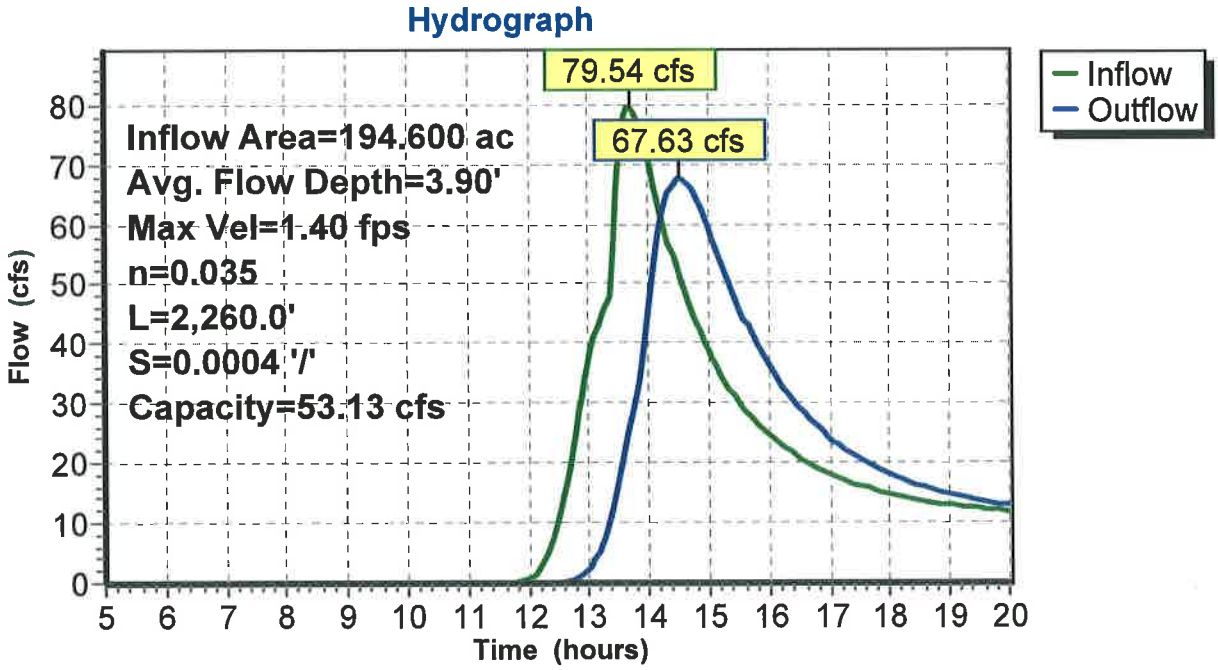
Inflow Area = 194.600 ac, 0.00% Impervious, Inflow Depth > 1.14" for 100-yr event
Inflow = 79.54 cfs @ 13.69 hrs, Volume= 18.430 af
Outflow = 67.63 cfs @ 14.53 hrs, Volume= 17.262 af, Atten= 15%, Lag= 50.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.40 fps, Min. Travel Time= 26.9 min
Avg. Velocity = 1.00 fps, Avg. Travel Time= 37.7 min

Peak Storage= 109,150 cf @ 14.08 hrs
Average Depth at Peak Storage= 3.90'
Bank-Full Depth= 3.50' Flow Area= 40.1 sf, Capacity= 53.13 cfs

2.00' x 3.50' deep channel, n= 0.035
Side Slope Z-value= 2.7 '/' Top Width= 20.90'
Length= 2,260.0' Slope= 0.0004 '/'
Inlet Invert= 1,196.40', Outlet Invert= 1,195.40'

Reach 7R: SE ditch



Summary for Pond 1P: NE ditch

Inflow Area = 97.400 ac, 0.00% Impervious, Inflow Depth > 1.29" for 100-yr event
Inflow = 61.93 cfs @ 12.80 hrs, Volume= 10.488 af
Outflow = 54.68 cfs @ 13.04 hrs, Volume= 10.479 af, Atten= 12%, Lag= 14.7 min
Primary = 34.63 cfs @ 13.04 hrs, Volume= 9.483 af
Secondary = 20.06 cfs @ 13.04 hrs, Volume= 0.996 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,200.34' @ 13.04 hrs Surf.Area= 142,437 sf Storage= 41,166 cf

Plug-Flow detention time= 7.1 min calculated for 10.444 af (100% of inflow)
Center-of-Mass det. time= 6.8 min (868.4 - 861.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.65'	215,897 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

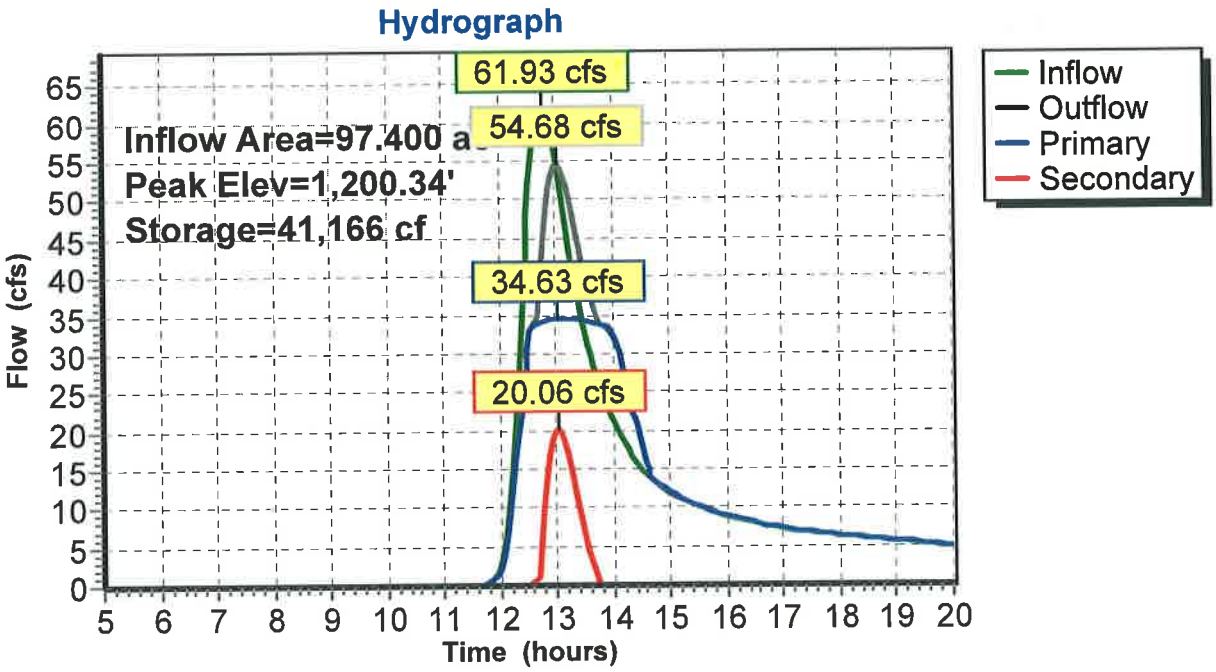
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.65	0	0	0
1,198.00	1,000	1,175	1,175
1,199.00	6,407	3,704	4,878
1,200.00	12,815	9,611	14,489
1,201.00	390,000	201,408	215,897

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.65'	**30.0" Round Culvert** L= 24.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.65' / 1,195.65' S= 0.0000 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,200.20'	**150.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=34.63 cfs @ 13.04 hrs HW=1,200.34' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 34.63 cfs @ 7.05 fps)

Secondary OutFlow Max=19.80 cfs @ 13.04 hrs HW=1,200.34' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 19.80 cfs @ 0.92 fps)

Pond 1P: NE ditch



Summary for Pond 3P: S Central ditch

Inflow Area = 263.600 ac, 0.00% Impervious, Inflow Depth > 1.37" for 100-yr event
Inflow = 97.65 cfs @ 12.55 hrs, Volume= 30.055 af
Outflow = 97.62 cfs @ 12.56 hrs, Volume= 29.675 af, Atten= 0%, Lag= 0.6 min
Primary = 18.46 cfs @ 12.56 hrs, Volume= 11.397 af
Secondary = 79.16 cfs @ 12.56 hrs, Volume= 18.278 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,198.10' @ 12.56 hrs Surf.Area= 15,436 sf Storage= 20,650 cf

Plug-Flow detention time= 6.8 min calculated for 29.675 af (99% of inflow)
Center-of-Mass det. time= 3.1 min (903.2 - 900.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.30'	74,844 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.30	0	0	0
1,196.50	5,940	3,564	3,564
1,197.50	11,880	8,910	12,474
1,198.50	17,820	14,850	27,324
1,200.50	29,700	47,520	74,844

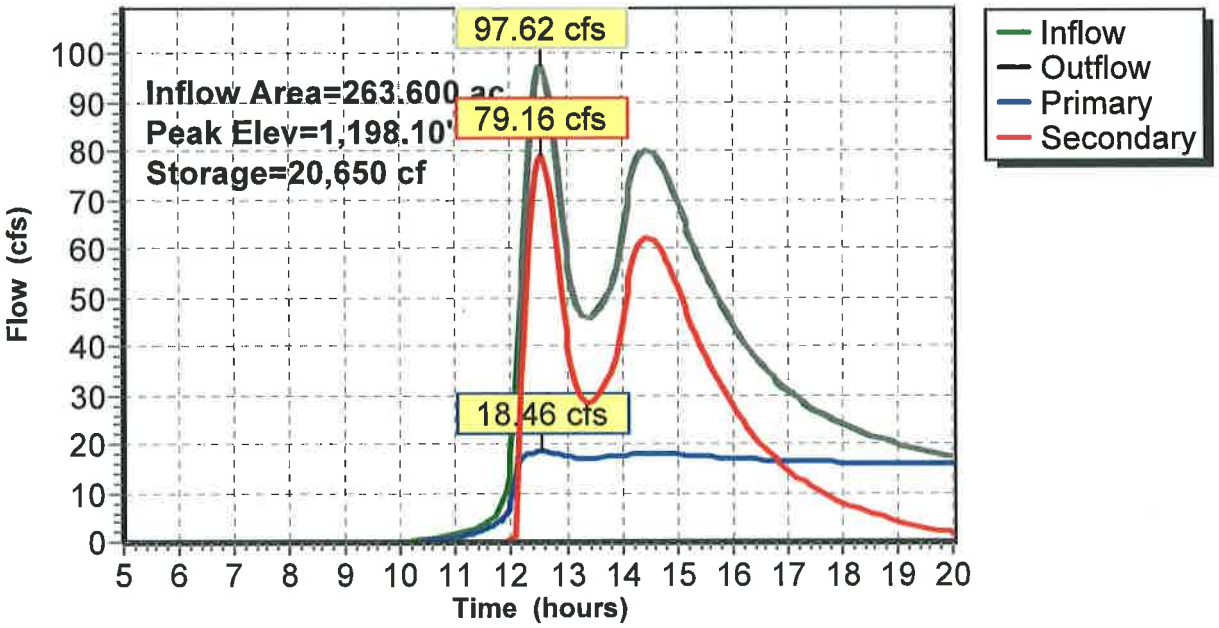
Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.48'	**30.0" Round Culvert** L= 20.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.37' / 1,195.48' S= -0.0055 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,197.80'	**180.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=18.45 cfs @ 12.56 hrs HW=1,198.10' (Free Discharge)
↑**1=Culvert** (Barrel Controls 18.45 cfs @ 4.29 fps)

Secondary OutFlow Max=78.89 cfs @ 12.56 hrs HW=1,198.10' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 78.89 cfs @ 1.47 fps)

Pond 3P: S Central ditch

Hydrograph



Summary for Pond 4P: SW ditch

Inflow Area = 323.600 ac, 0.00% Impervious, Inflow Depth > 1.41" for 100-yr event
Inflow = 167.16 cfs @ 12.48 hrs, Volume= 38.064 af
Outflow = 166.93 cfs @ 12.49 hrs, Volume= 37.998 af, Atten= 0%, Lag= 0.6 min
Primary = 162.57 cfs @ 12.49 hrs, Volume= 37.894 af
Secondary = 4.36 cfs @ 12.49 hrs, Volume= 0.104 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.39' @ 12.49 hrs Surf.Area= 23,503 sf Storage= 37,474 cf

Plug-Flow detention time= 5.2 min calculated for 37.998 af (100% of inflow)
Center-of-Mass det. time= 4.6 min (892.4 - 887.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,194.20'	92,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,194.20	0	0	0
1,195.20	7,370	3,685	3,685
1,196.20	14,740	11,055	14,740
1,197.20	22,110	18,425	33,165
1,199.20	36,850	58,960	92,125

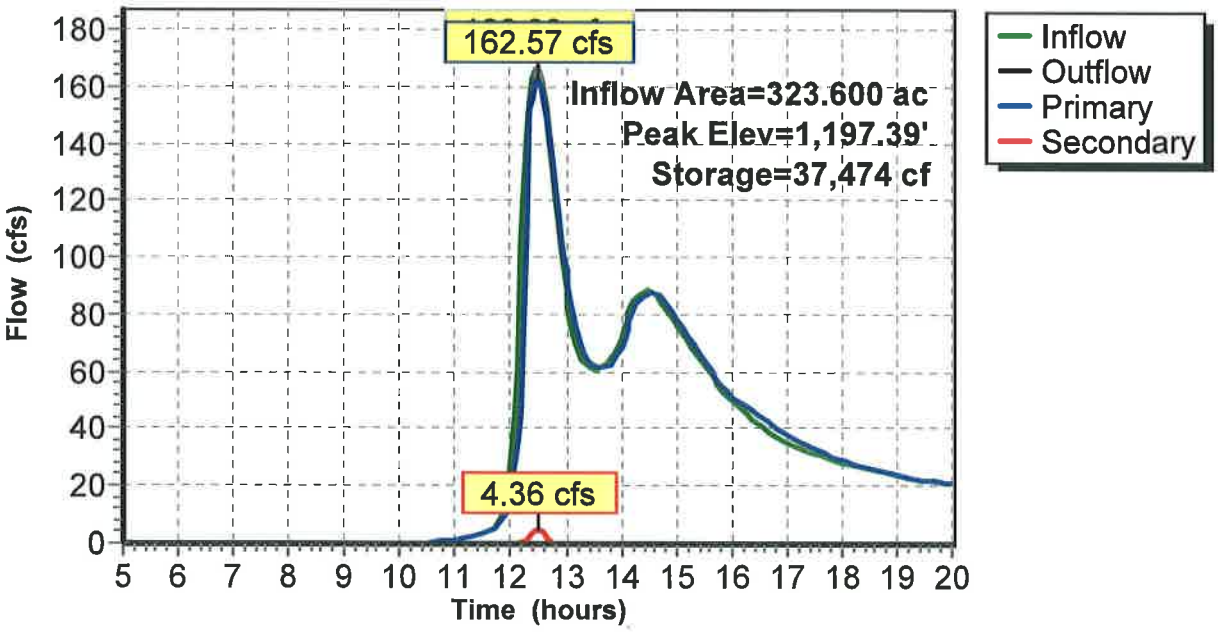
Device	Routing	Invert	Outlet Devices
#1	Primary	1,194.00'	**Special & User-Defined** Head (feet) 0.00 2.60 3.22 3.49 3.70 3.80 Disch. (cfs) 0.000 50.000 100.000 200.000 350.000 500.000
#2	Secondary	1,197.30'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=162.34 cfs @ 12.49 hrs HW=1,197.39' (Free Discharge)
↑—**1=Special & User-Defined** (Custom Controls 162.34 cfs)

Secondary OutFlow Max=4.22 cfs @ 12.49 hrs HW=1,197.39' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 4.22 cfs @ 0.80 fps)

Pond 4P: SW ditch

Hydrograph



Summary for Pond 5P: C ditch

Inflow Area = 53.000 ac, 0.00% Impervious, Inflow Depth > 2.17" for 100-yr event
Inflow = 46.57 cfs @ 13.20 hrs, Volume= 9.599 af
Outflow = 46.56 cfs @ 13.20 hrs, Volume= 9.599 af, Atten= 0%, Lag= 0.0 min
Primary = 46.56 cfs @ 13.20 hrs, Volume= 9.599 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,188.77' @ 13.20 hrs Surf.Area= 324 sf Storage= 174 cf

Plug-Flow detention time= 0.0 min calculated for 9.599 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (865.9 - 865.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,187.70'	476,150 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

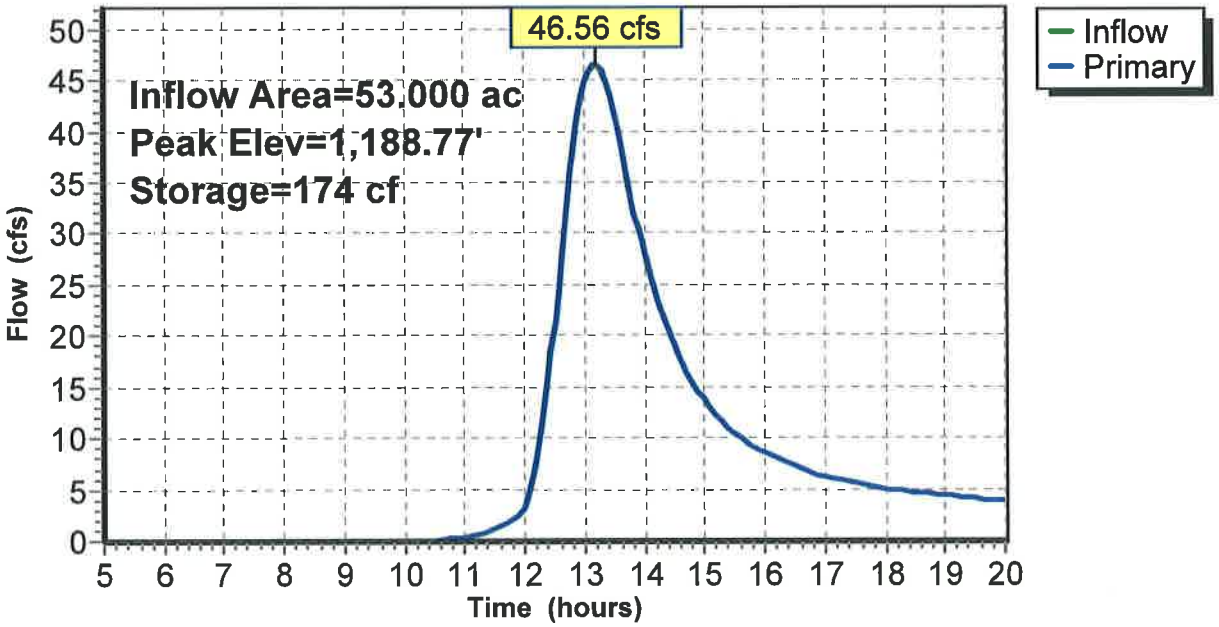
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,187.70	0	0	0
1,191.00	1,000	1,650	1,650
1,192.00	5,500	3,250	4,900
1,193.00	11,000	8,250	13,150
1,194.00	16,500	13,750	26,900
1,196.00	27,500	44,000	70,900
1,198.00	58,500	86,000	156,900
1,199.00	580,000	319,250	476,150

Device	Routing	Invert	Outlet Devices
#1	Primary	1,187.70'	**Ditch Flow** Head (feet) 0.00 1.00 2.00 3.00 4.00 Disch. (cfs) 0.000 40.000 133.000 300.000 550.000
#2	Primary	1,198.00'	**200.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=46.55 cfs @ 13.20 hrs HW=1,188.77' (Free Discharge)
↑—**1=Ditch Flow** (Custom Controls 46.55 cfs)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 5P: C ditch

Hydrograph



Summary for Pond 6P: Road Ditch

Inflow Area = 97.300 ac, 0.00% Impervious, Inflow Depth > 1.25" for 100-yr event
Inflow = 41.72 cfs @ 13.47 hrs, Volume= 10.158 af
Outflow = 39.56 cfs @ 13.74 hrs, Volume= 8.271 af, Atten= 5%, Lag= 16.3 min
Primary = 39.56 cfs @ 13.74 hrs, Volume= 8.271 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,204.05' @ 13.74 hrs Surf.Area= 66,366 sf Storage= 101,875 cf

Plug-Flow detention time= 81.4 min calculated for 8.244 af (81% of inflow)
Center-of-Mass det. time= 36.4 min (931.1 - 894.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,200.00'	263,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

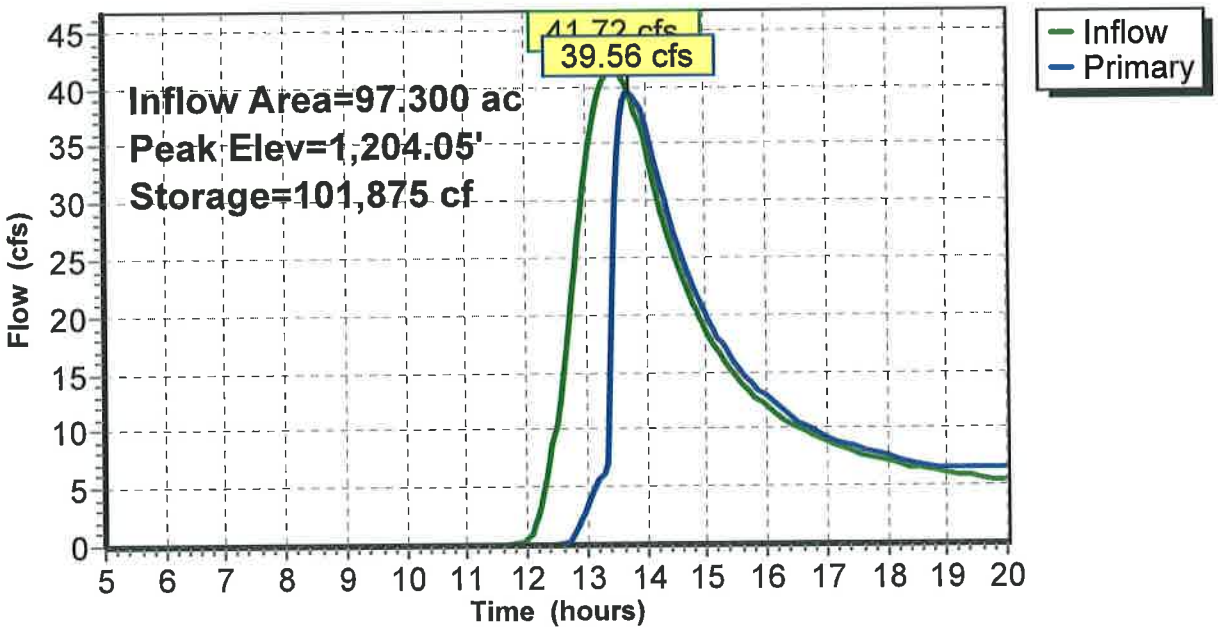
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,200.00	1,000	0	0
1,202.00	12,300	13,300	13,300
1,203.00	46,000	29,150	42,450
1,203.80	62,000	43,200	85,650
1,206.00	100,000	178,200	263,850

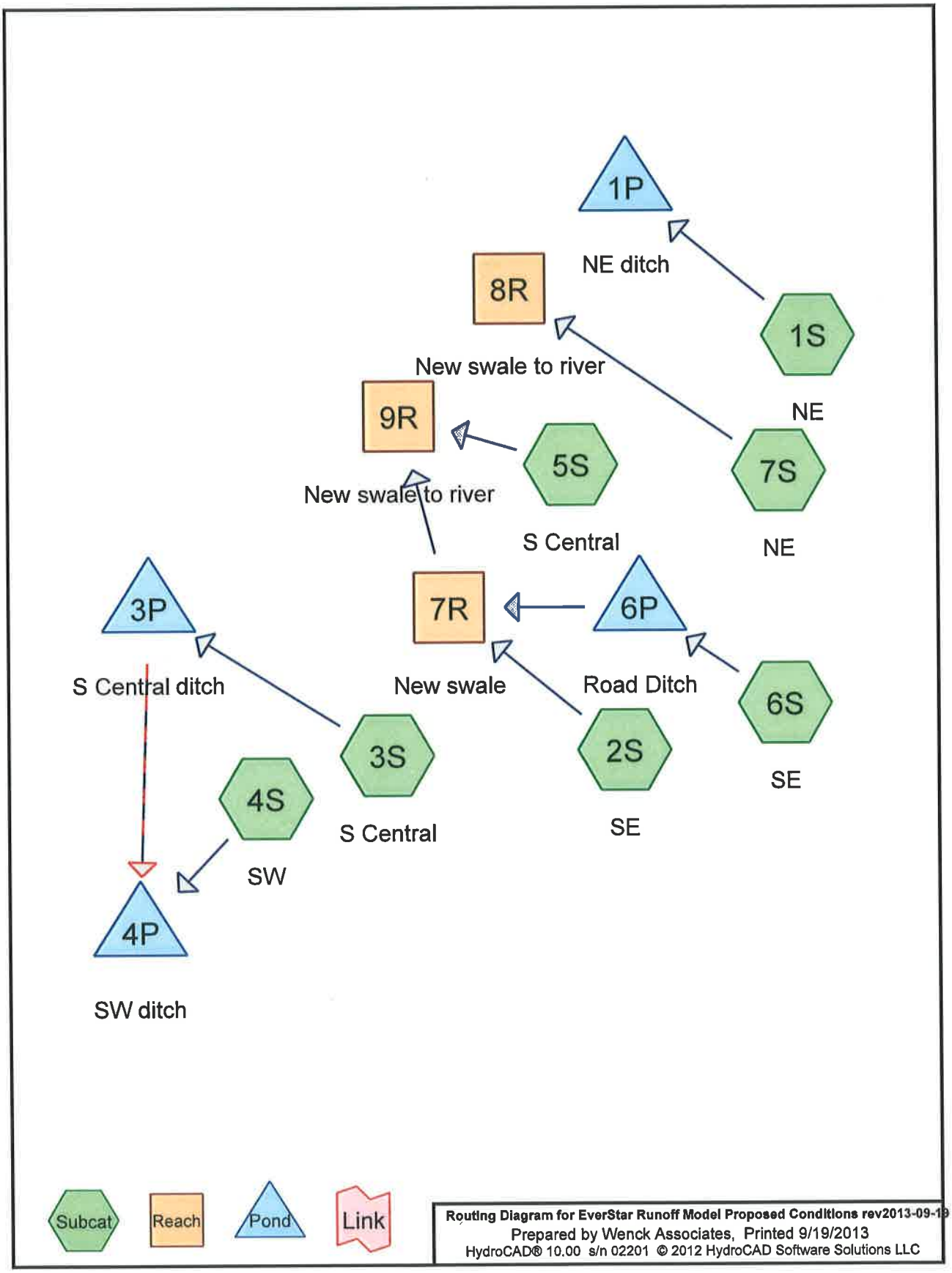
Device	Routing	Invert	Outlet Devices
#1	Primary	1,202.06'	**18.0" Round Culvert** L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,200.67' / 1,202.06' S= -0.0397 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf
#2	Primary	1,203.80'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=39.35 cfs @ 13.74 hrs HW=1,204.05' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 7.49 cfs @ 4.24 fps)
└—**2=Broad-Crested Rectangular Weir** (Weir Controls 31.86 cfs @ 1.26 fps)

Pond 6P: Road Ditch

Hydrograph




1P
NE ditch
8R
1S
New swale to river
NE
9R
5S
7S
New swale to river
S Central
NE
3P
7R
6P
S Central ditch
New swale
Road Ditch
6S
3S
2S
SE
4S
S Central
SE
SW
4P
SW ditch
Subcat
Reach
Pond
Link
Routing Diagram for EverStar Runoff Model Proposed Conditions rev2013-09-19
Prepared by Wenck Associates, Printed 9/19/2013
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
133.100	49	Pasture/grassland/range, Fair, HSG A (1S, 2S, 4S, 6S, 7S)
237.400	69	Pasture/grassland/range, Fair, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S)
370.500	**62**	**TOTAL AREA**

Summary for Subcatchment 1S: NE

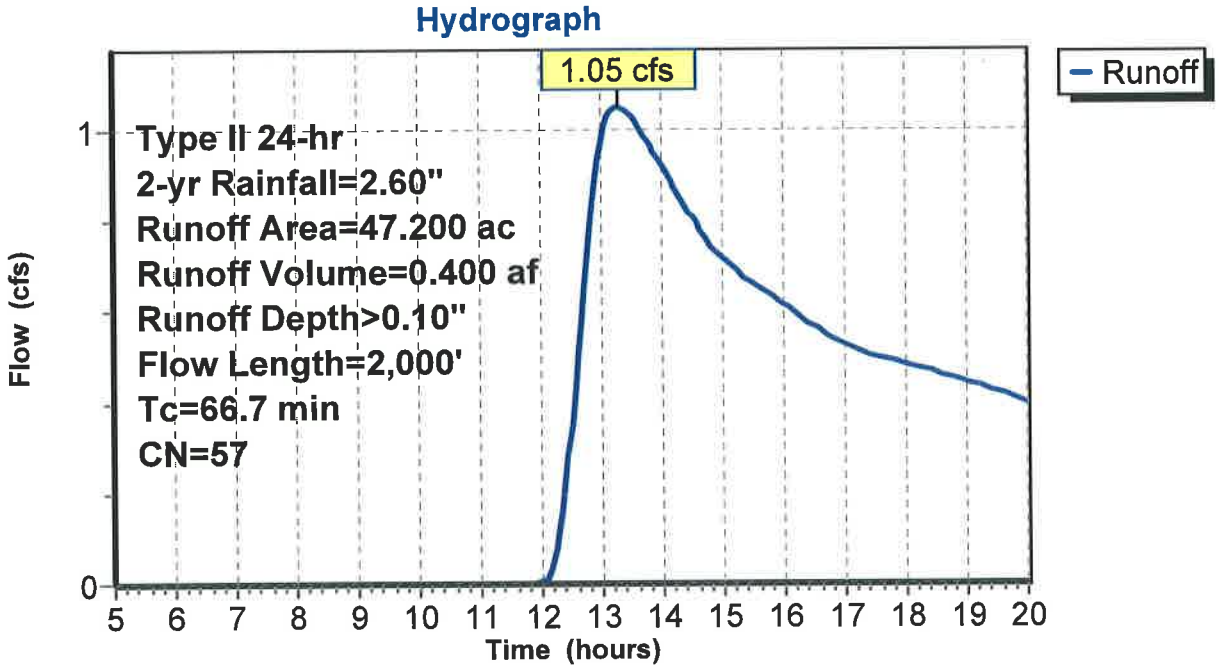
Runoff = 1.05 cfs @ 13.27 hrs, Volume= 0.400 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
28.300	49	Pasture/grassland/range, Fair, HSG A
18.900	69	Pasture/grassland/range, Fair, HSG B
47.200	57	Weighted Average
47.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 1S: NE



Summary for Subcatchment 2S: SE

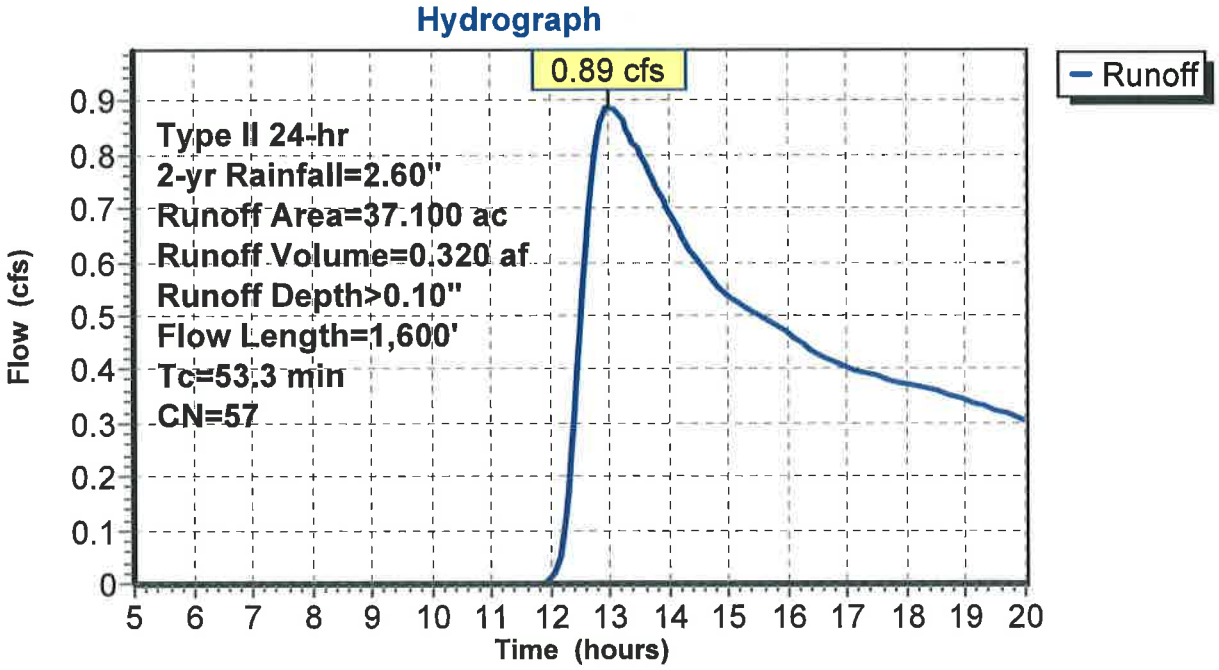
Runoff = 0.89 cfs @ 13.01 hrs, Volume= 0.320 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
22.300	49	Pasture/grassland/range, Fair, HSG A
14.800	69	Pasture/grassland/range, Fair, HSG B
37.100	57	Weighted Average
37.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
53.3	1,600		0.50		**Direct Entry,**

Subcatchment 2S: SE



Summary for Subcatchment 3S: S Central

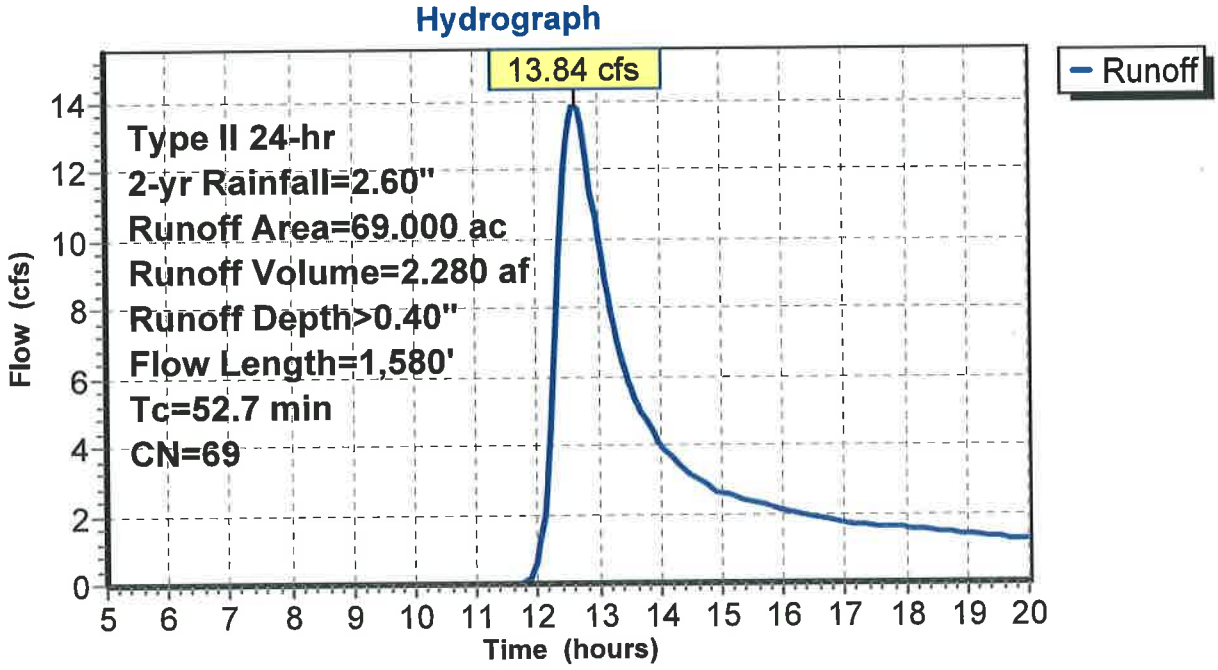
Runoff = 13.84 cfs @ 12.63 hrs, Volume= 2.280 af, Depth> 0.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
69.000	69	Pasture/grassland/range, Fair, HSG B
69.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.7	1,580		0.50		**Direct Entry,**

Subcatchment 3S: S Central



Summary for Subcatchment 4S: SW

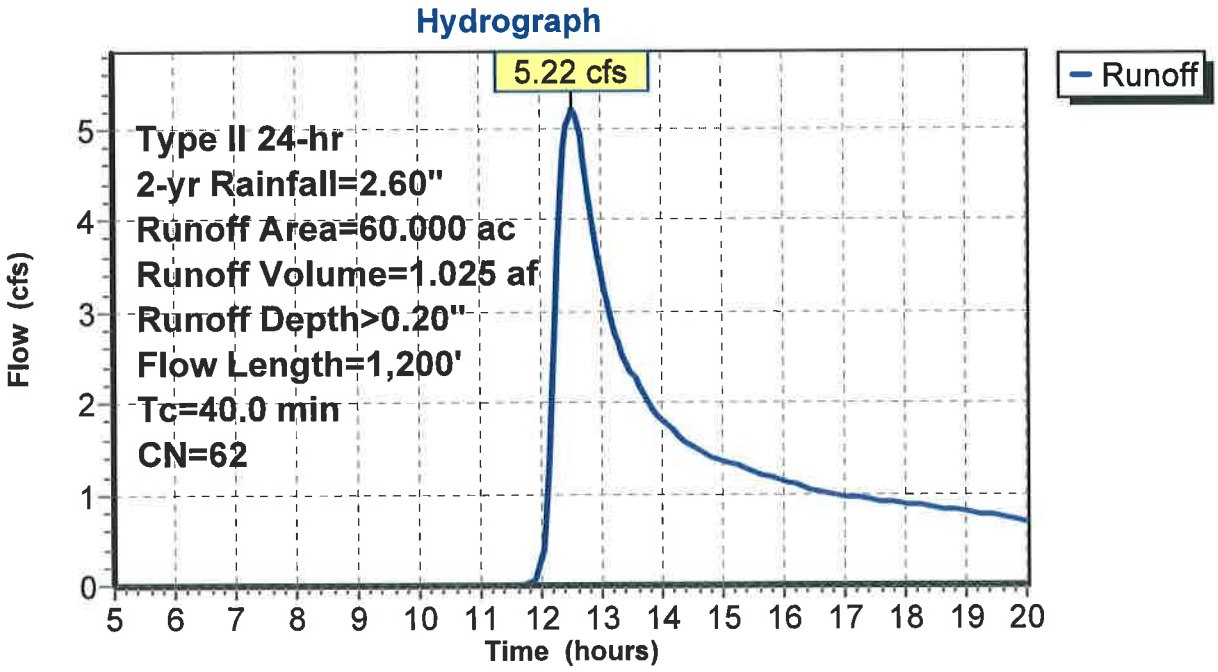
Runoff = 5.22 cfs @ 12.53 hrs, Volume= 1.025 af, Depth> 0.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
20.000	49	Pasture/grassland/range, Fair, HSG A
40.000	69	Pasture/grassland/range, Fair, HSG B
60.000	62	Weighted Average
60.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	1,200		0.50		**Direct Entry,**

Subcatchment 4S: SW



Summary for Subcatchment 5S: S Central

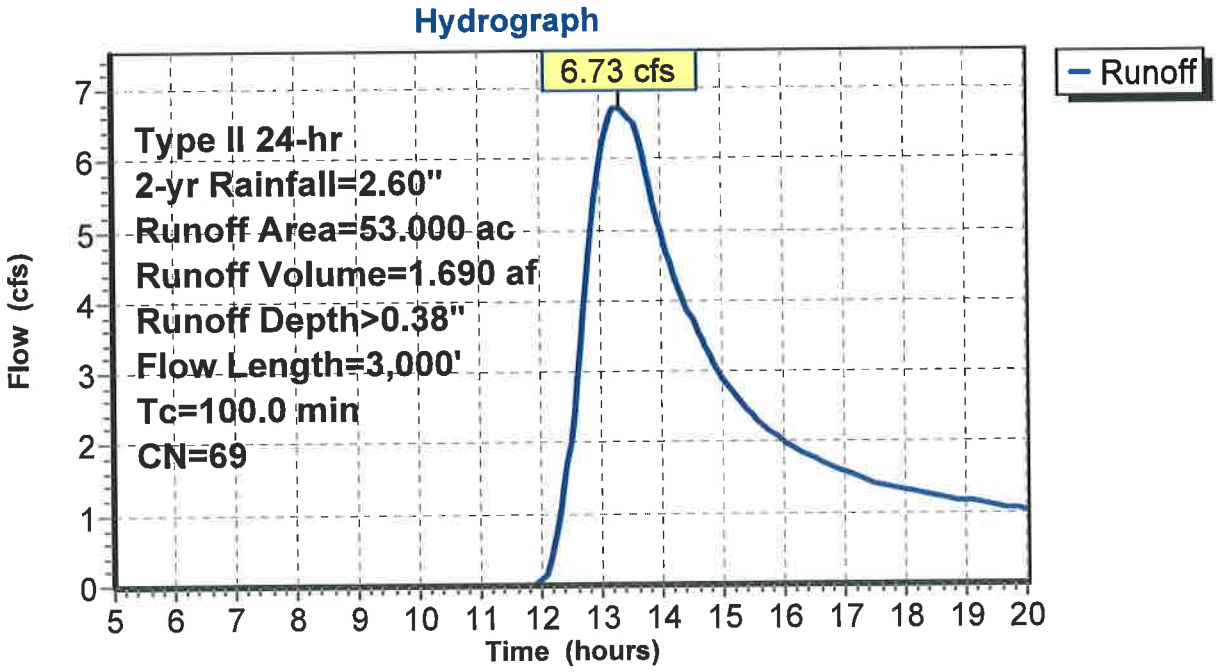
Runoff = 6.73 cfs @ 13.33 hrs, Volume= 1.690 af, Depth> 0.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
53.000	69	Pasture/grassland/range, Fair, HSG B
53.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
100.0	3,000		0.50		**Direct Entry,**

Subcatchment 5S: S Central



Summary for Subcatchment 6S: SE

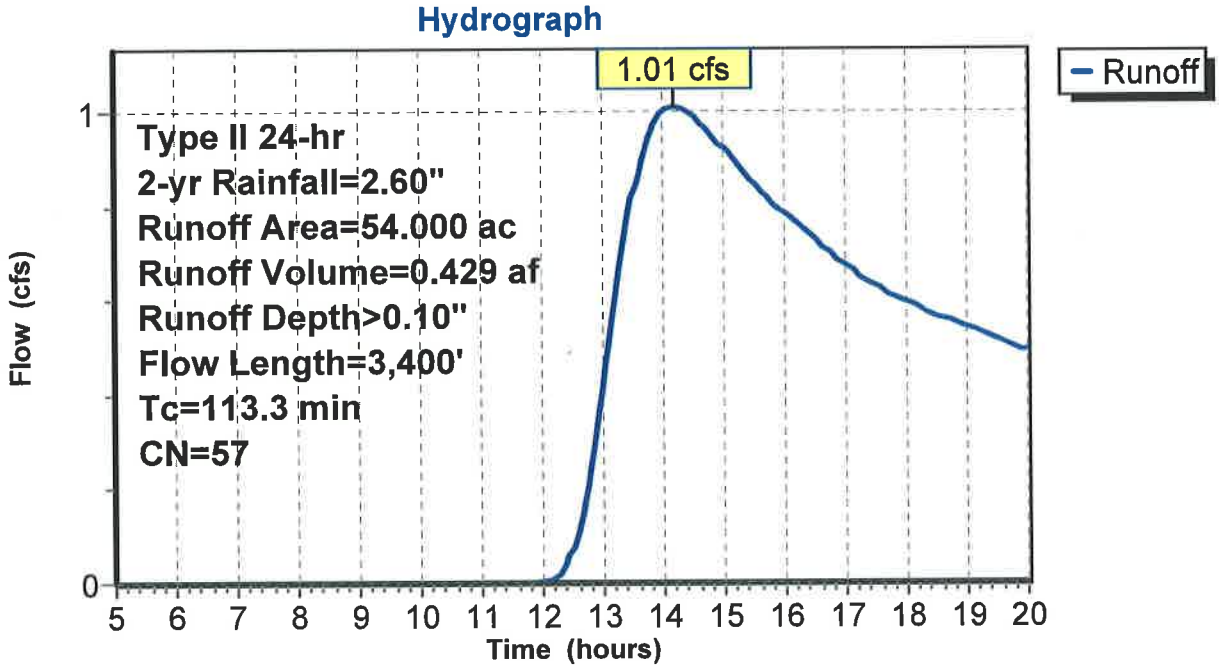
Runoff = 1.01 cfs @ 14.19 hrs, Volume= 0.429 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
32.400	49	Pasture/grassland/range, Fair, HSG A
21.600	69	Pasture/grassland/range, Fair, HSG B
54.000	57	Weighted Average
54.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 6S: SE



Summary for Subcatchment 7S: NE

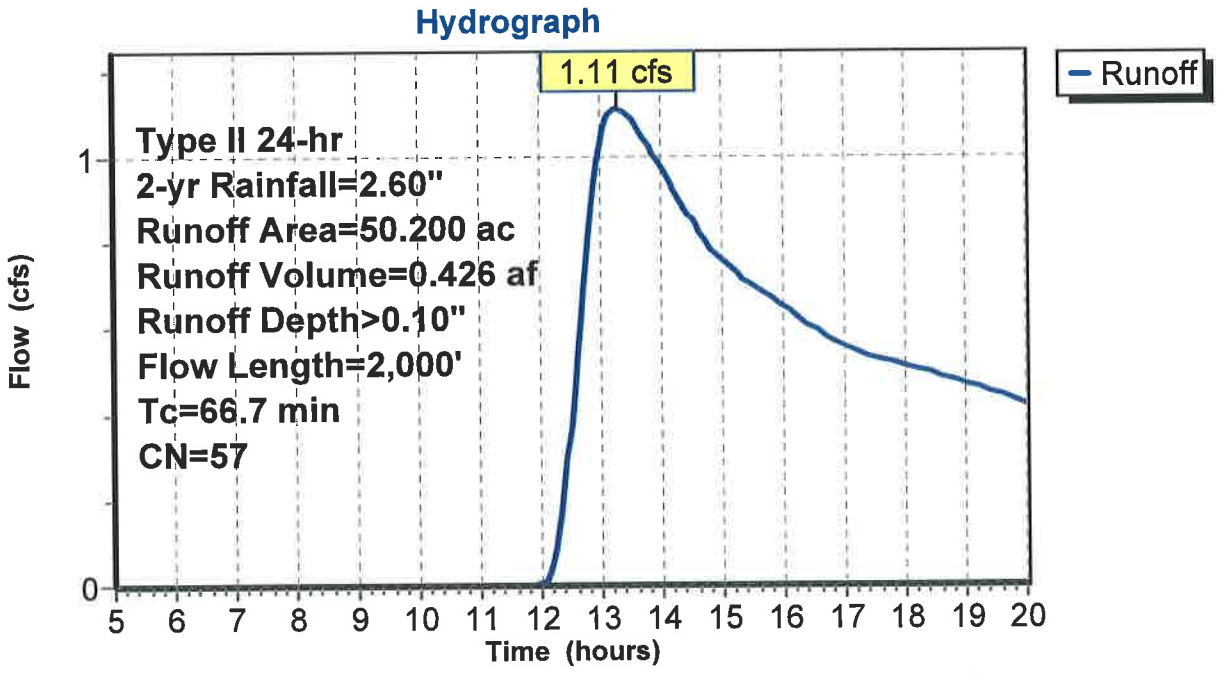
Runoff = 1.11 cfs @ 13.27 hrs, Volume= 0.426 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.60"

Area (ac)	CN	Description
30.100	49	Pasture/grassland/range, Fair, HSG A
20.100	69	Pasture/grassland/range, Fair, HSG B
50.200	57	Weighted Average
50.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 7S: NE



Summary for Reach 7R: New swale

Inflow Area = 91.100 ac, 0.00% Impervious, Inflow Depth > 0.04" for 2-yr event
Inflow = 0.89 cfs @ 13.01 hrs, Volume= 0.337 af
Outflow = 0.50 cfs @ 17.68 hrs, Volume= 0.174 af, Atten= 43%, Lag= 280.6 min

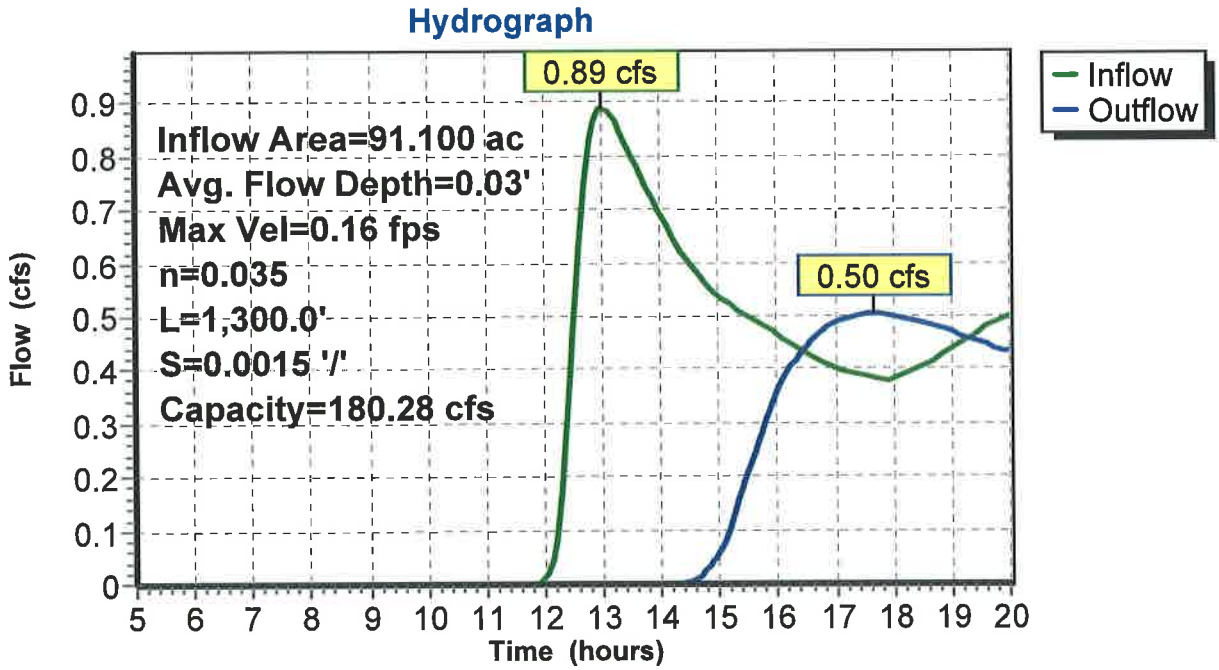
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.16 fps, Min. Travel Time= 132.9 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 151.3 min

Peak Storage= 4,012 cf @ 15.47 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 180.28 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 1,300.0' Slope= 0.0015 '/'
Inlet Invert= 1,201.00', Outlet Invert= 1,199.00'

‡

Reach 7R: New swale



Summary for Reach 8R: New swale to river

Inflow Area = 50.200 ac, 0.00% Impervious, Inflow Depth > 0.10" for 2-yr event
Inflow = 1.11 cfs @ 13.27 hrs, Volume= 0.426 af
Outflow = 0.94 cfs @ 14.92 hrs, Volume= 0.358 af, Atten= 16%, Lag= 98.9 min

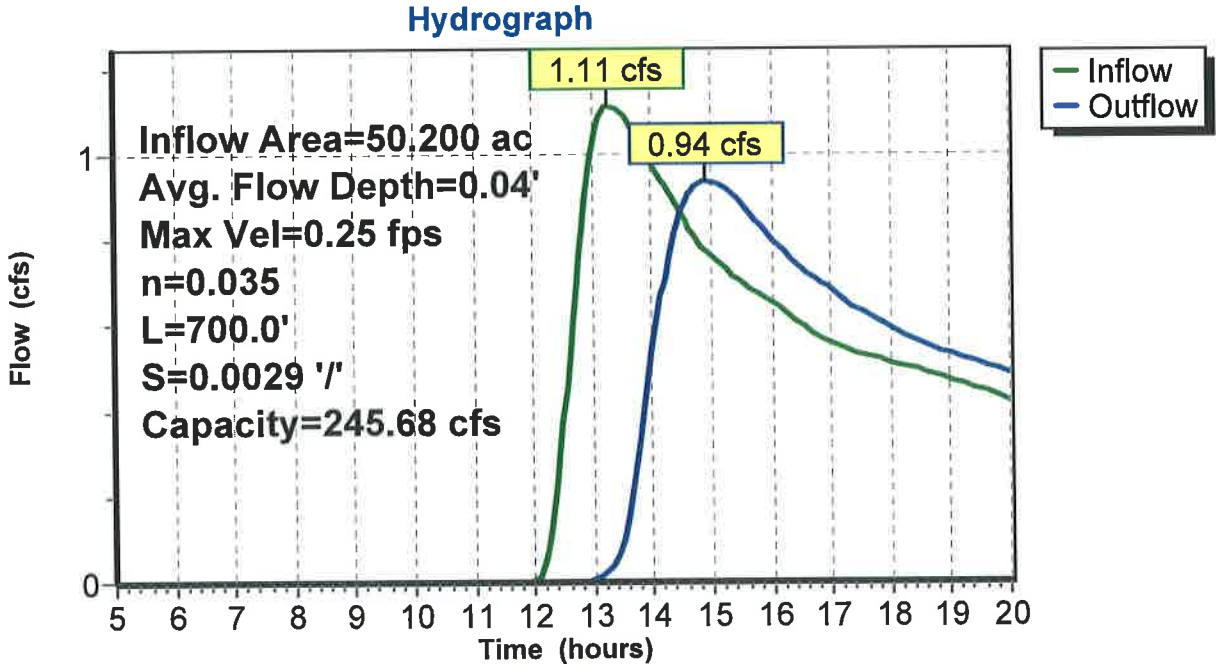
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.25 fps, Min. Travel Time= 46.2 min
Avg. Velocity = 0.21 fps, Avg. Travel Time= 56.8 min

Peak Storage= 2,606 cf @ 14.15 hrs
Average Depth at Peak Storage= 0.04'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 245.68 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 700.0' Slope= 0.0029 '/'
Inlet Invert= 1,200.00', Outlet Invert= 1,198.00'

‡

Reach 8R: New swale to river



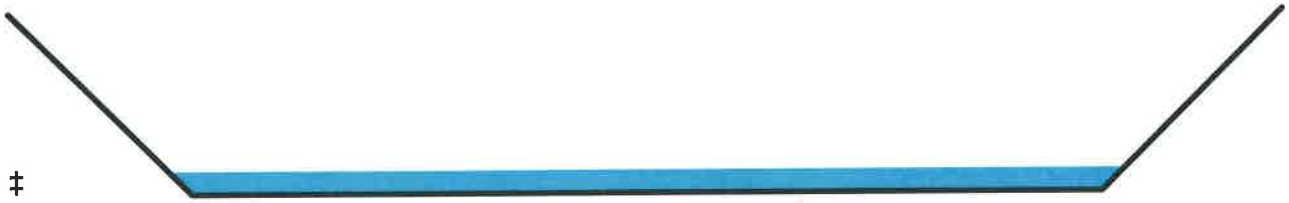
Summary for Reach 9R: New swale to river

Inflow Area = 144.100 ac, 0.00% Impervious, Inflow Depth > 0.16" for 2-yr event
Inflow = 6.73 cfs @ 13.33 hrs, Volume= 1.863 af
Outflow = 5.18 cfs @ 14.77 hrs, Volume= 1.572 af, Atten= 23%, Lag= 86.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.40 fps, Min. Travel Time= 50.3 min
Avg. Velocity = 0.28 fps, Avg. Travel Time= 71.0 min

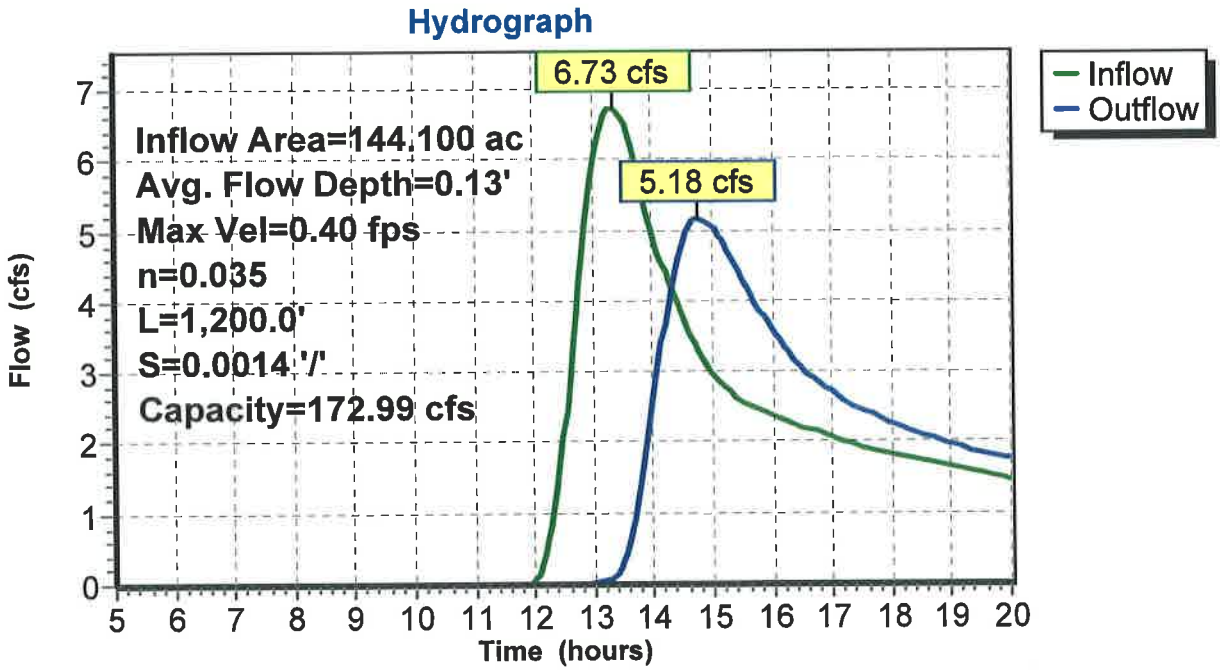
Peak Storage= 15,634 cf @ 13.94 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 172.99 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 1,200.0' Slope= 0.0014 '/'
Inlet Invert= 1,198.70', Outlet Invert= 1,197.00'



‡

Reach 9R: New swale to river



Summary for Pond 1P: NE ditch

Inflow Area = 47.200 ac, 0.00% Impervious, Inflow Depth > 0.10" for 2-yr event
Inflow = 1.05 cfs @ 13.27 hrs, Volume= 0.400 af
Outflow = 1.05 cfs @ 13.30 hrs, Volume= 0.399 af, Atten= 0%, Lag= 1.6 min
Primary = 1.05 cfs @ 13.30 hrs, Volume= 0.399 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,196.29' @ 13.30 hrs Surf.Area= 271 sf Storage= 86 cf

Plug-Flow detention time= 1.5 min calculated for 0.398 af (99% of inflow)
Center-of-Mass det. time= 0.9 min (939.5 - 938.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.65'	215,897 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.65	0	0	0
1,198.00	1,000	1,175	1,175
1,199.00	6,407	3,704	4,878
1,200.00	12,815	9,611	14,489
1,201.00	390,000	201,408	215,897

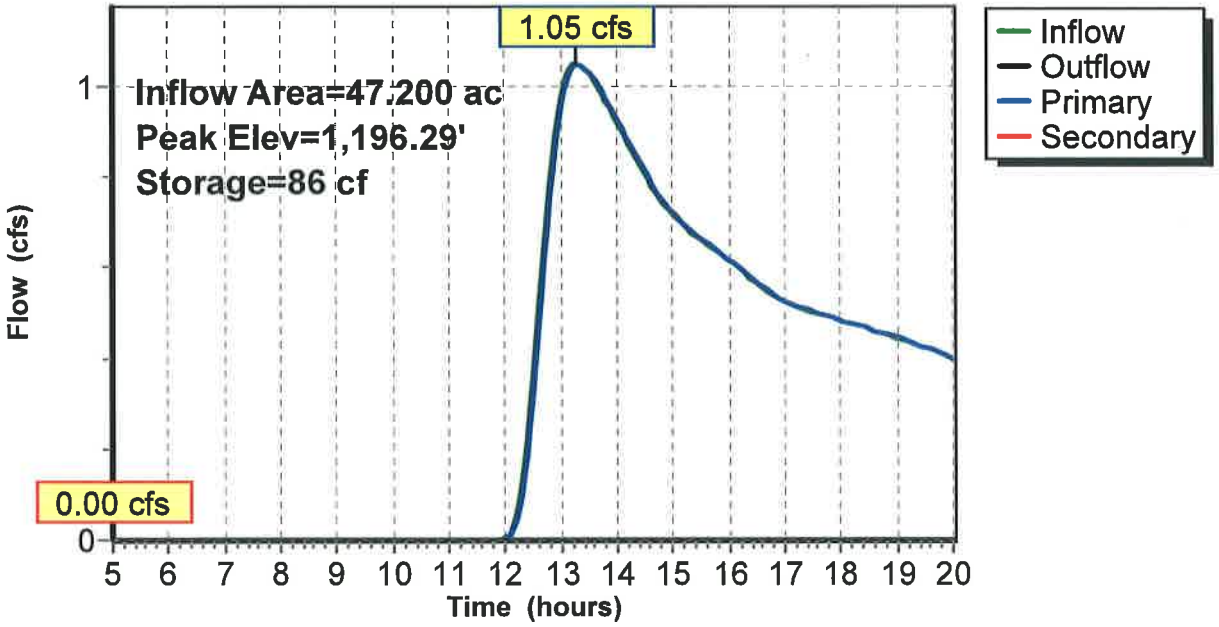
Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.65'	**30.0" Round Culvert** L= 24.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.65' / 1,195.65' S= 0.0000 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,200.20'	**150.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=1.05 cfs @ 13.30 hrs HW=1,196.29' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.05 cfs @ 1.60 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.65' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: NE ditch

Hydrograph



Summary for Pond 3P: S Central ditch

Inflow Area = 69.000 ac, 0.00% Impervious, Inflow Depth > 0.40" for 2-yr event
Inflow = 13.84 cfs @ 12.63 hrs, Volume= 2.280 af
Outflow = 11.44 cfs @ 12.90 hrs, Volume= 2.248 af, Atten= 17%, Lag= 16.1 min
Primary = 11.44 cfs @ 12.90 hrs, Volume= 2.248 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.40' @ 12.90 hrs Surf.Area= 11,280 sf Storage= 11,304 cf

Plug-Flow detention time= 16.4 min calculated for 2.248 af (99% of inflow)
Center-of-Mass det. time= 11.8 min (878.9 - 867.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.30'	74,844 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.30	0	0	0
1,196.50	5,940	3,564	3,564
1,197.50	11,880	8,910	12,474
1,198.50	17,820	14,850	27,324
1,200.50	29,700	47,520	74,844

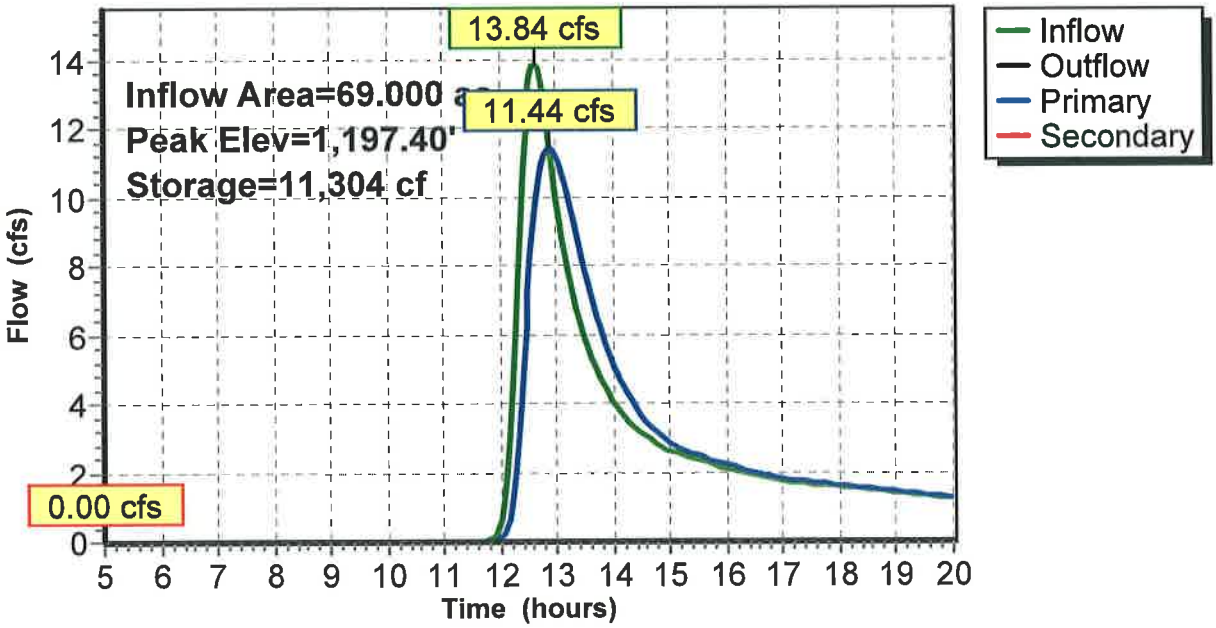
Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.48'	**30.0" Round Culvert** L= 20.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.37' / 1,195.48' S= -0.0055 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,197.80'	**180.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.43 cfs @ 12.90 hrs HW=1,197.40' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 11.43 cfs @ 3.66 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.30' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: S Central ditch

Hydrograph



Summary for Pond 4P: SW ditch

Inflow Area = 129.000 ac, 0.00% Impervious, Inflow Depth > 0.30" for 2-yr event
Inflow = 15.41 cfs @ 12.81 hrs, Volume= 3.273 af
Outflow = 15.32 cfs @ 12.87 hrs, Volume= 3.273 af, Atten= 1%, Lag= 3.6 min
Primary = 15.32 cfs @ 12.87 hrs, Volume= 3.273 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,194.80' @ 12.87 hrs Surf.Area= 4,396 sf Storage= 1,311 cf

Plug-Flow detention time= 0.5 min calculated for 3.262 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (882.3 - 881.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,194.20'	92,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

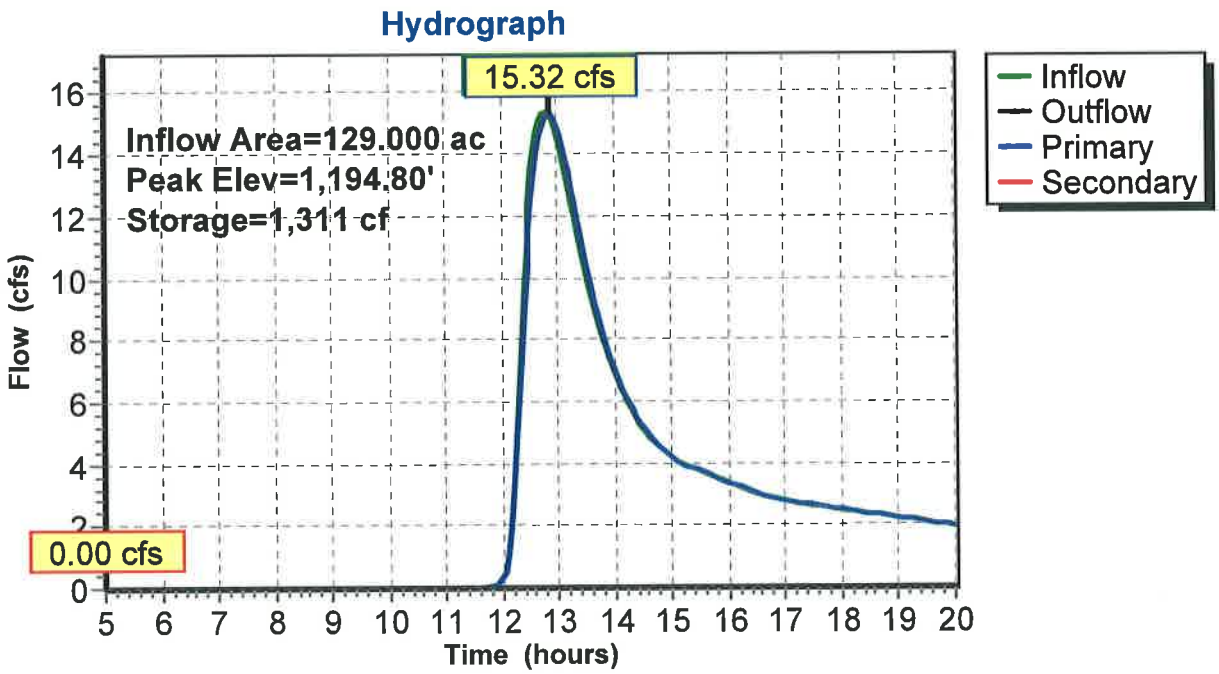
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,194.20	0	0	0
1,195.20	7,370	3,685	3,685
1,196.20	14,740	11,055	14,740
1,197.20	22,110	18,425	33,165
1,199.20	36,850	58,960	92,125

Device	Routing	Invert	Outlet Devices
#1	Primary	1,194.00'	**Special & User-Defined** Head (feet) 0.00 2.60 3.22 3.49 3.70 3.80 Disch. (cfs) 0.000 50.000 100.000 200.000 350.000 500.000
#2	Secondary	1,197.30'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=15.30 cfs @ 12.87 hrs HW=1,194.80' (Free Discharge)
↑—**1=Special & User-Defined** (Custom Controls 15.30 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,194.20' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: SW ditch



Summary for Pond 6P: Road Ditch

Inflow Area = 54.000 ac, 0.00% Impervious, Inflow Depth > 0.10" for 2-yr event
Inflow = 1.01 cfs @ 14.19 hrs, Volume= 0.429 af
Outflow = 0.19 cfs @ 20.00 hrs, Volume= 0.017 af, Atten= 81%, Lag= 348.4 min
Primary = 0.19 cfs @ 20.00 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,202.27' @ 20.00 hrs Surf.Area= 21,520 sf Storage= 17,926 cf

Plug-Flow detention time= 386.1 min calculated for 0.017 af (4% of inflow)
Center-of-Mass det. time= 196.2 min (1,160.4 - 964.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,200.00'	263,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

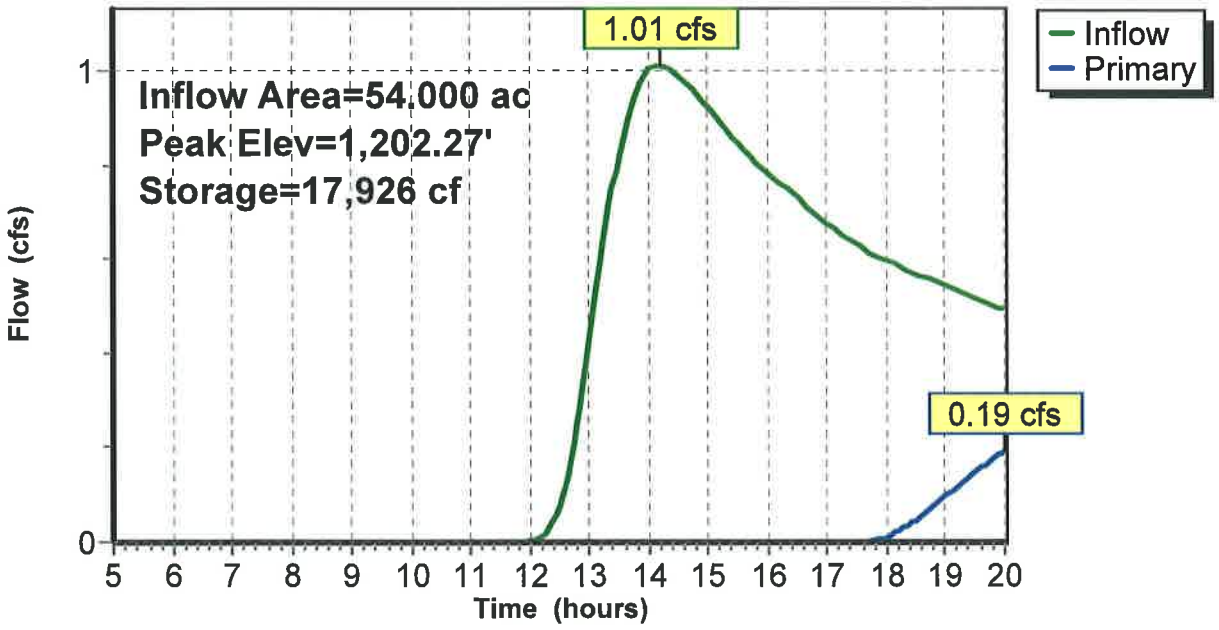
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,200.00	1,000	0	0
1,202.00	12,300	13,300	13,300
1,203.00	46,000	29,150	42,450
1,203.80	62,000	43,200	85,650
1,206.00	100,000	178,200	263,850

Device	Routing	Invert	Outlet Devices
#1	Primary	1,202.06'	**18.0" Round Culvert** L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,200.67' / 1,202.06' S= -0.0397 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf
#2	Primary	1,203.80'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.19 cfs @ 20.00 hrs HW=1,202.27' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.19 cfs @ 1.24 fps)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 6P: Road Ditch

Hydrograph



Summary for Subcatchment 1S: NE

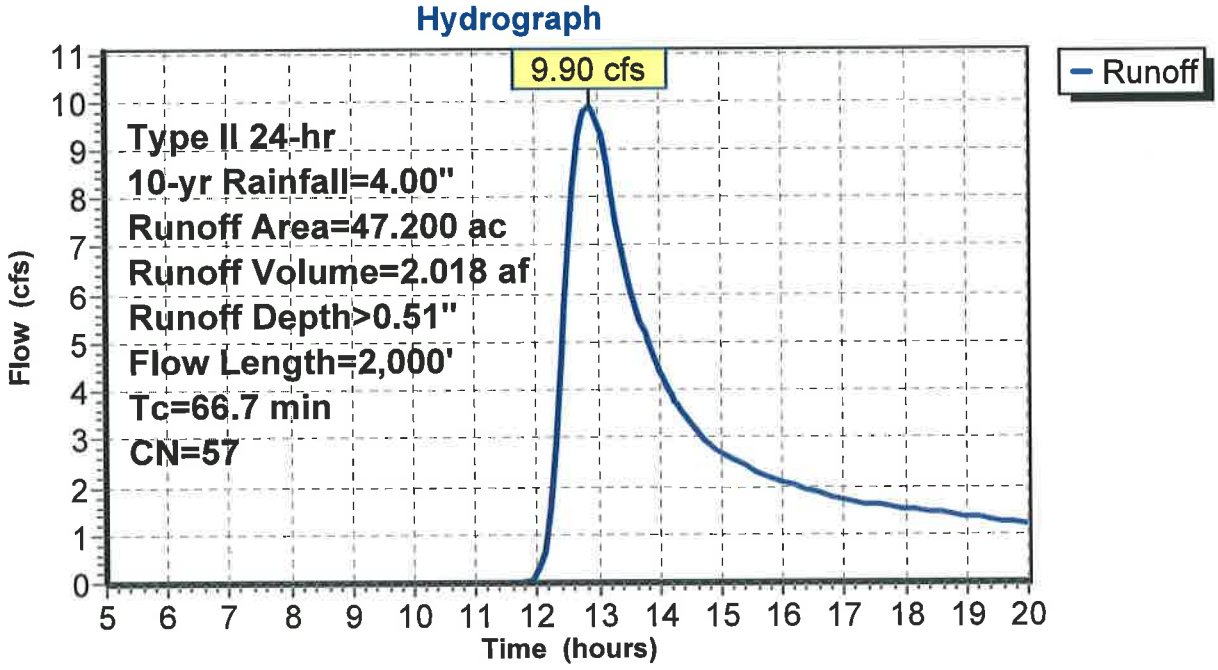
Runoff = 9.90 cfs @ 12.86 hrs, Volume= 2.018 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
28.300	49	Pasture/grassland/range, Fair, HSG A
18.900	69	Pasture/grassland/range, Fair, HSG B
47.200	57	Weighted Average
47.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 1S: NE



Summary for Subcatchment 2S: SE

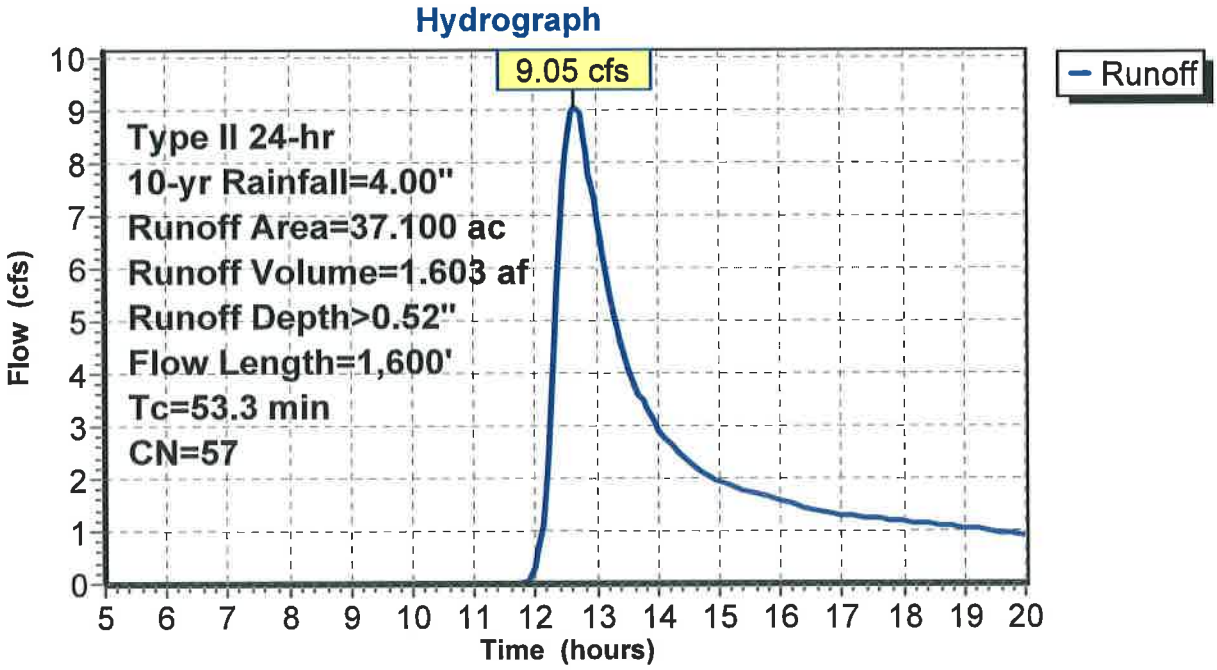
Runoff = 9.05 cfs @ 12.66 hrs, Volume= 1.603 af, Depth> 0.52"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
22.300	49	Pasture/grassland/range, Fair, HSG A
14.800	69	Pasture/grassland/range, Fair, HSG B
37.100	57	Weighted Average
37.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
53.3	1,600		0.50		**Direct Entry,**

Subcatchment 2S: SE



Summary for Subcatchment 3S: S Central

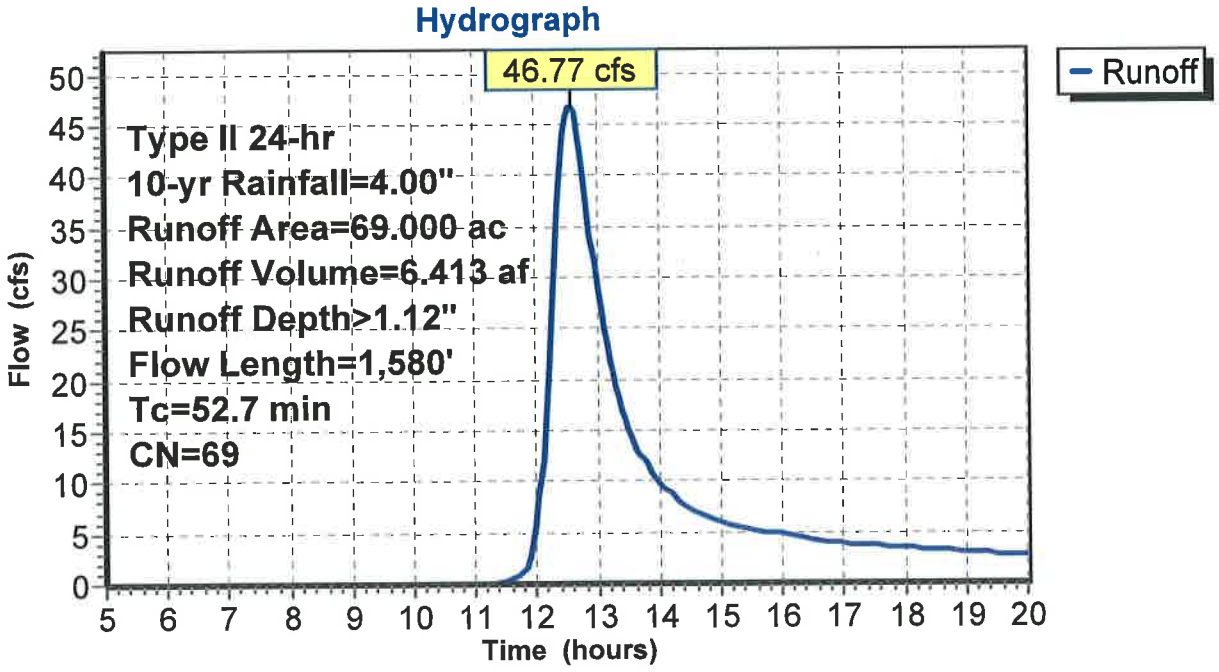
Runoff = 46.77 cfs @ 12.58 hrs, Volume= 6.413 af, Depth> 1.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
69.000	69	Pasture/grassland/range, Fair, HSG B
69.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.7	1,580		0.50		**Direct Entry,**

Subcatchment 3S: S Central



Summary for Subcatchment 4S: SW

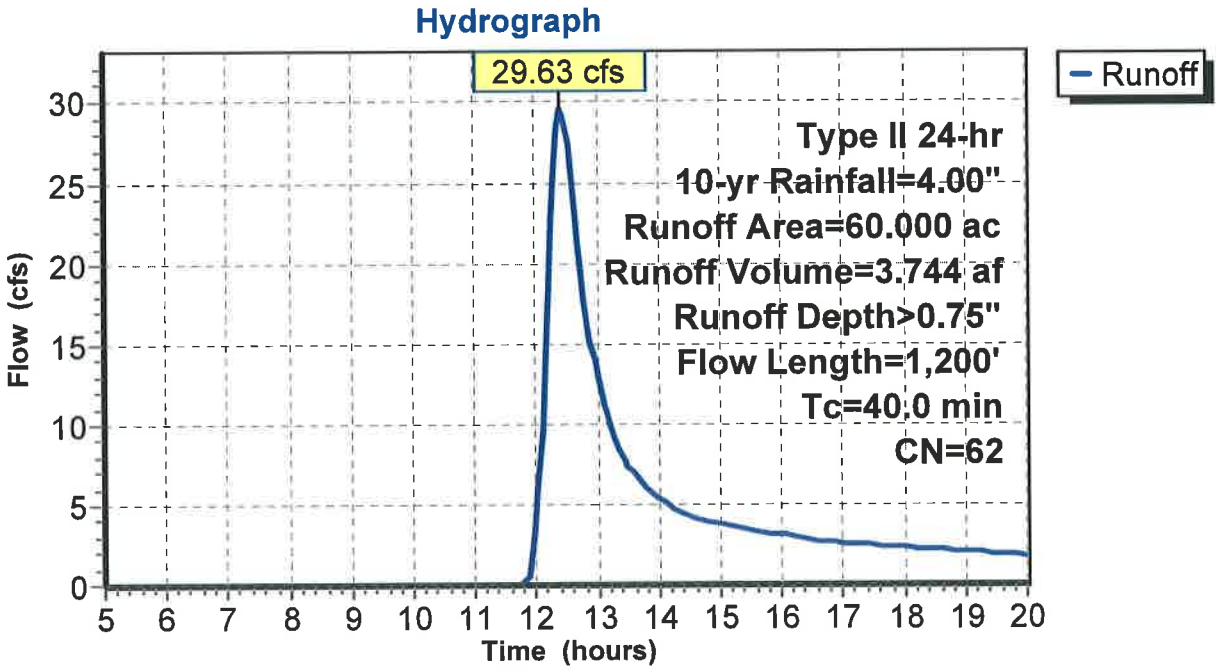
Runoff = 29.63 cfs @ 12.43 hrs, Volume= 3.744 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
20.000	49	Pasture/grassland/range, Fair, HSG A
40.000	69	Pasture/grassland/range, Fair, HSG B
60.000	62	Weighted Average
60.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	1,200		0.50		**Direct Entry,**

Subcatchment 4S: SW



Summary for Subcatchment 5S: S Central

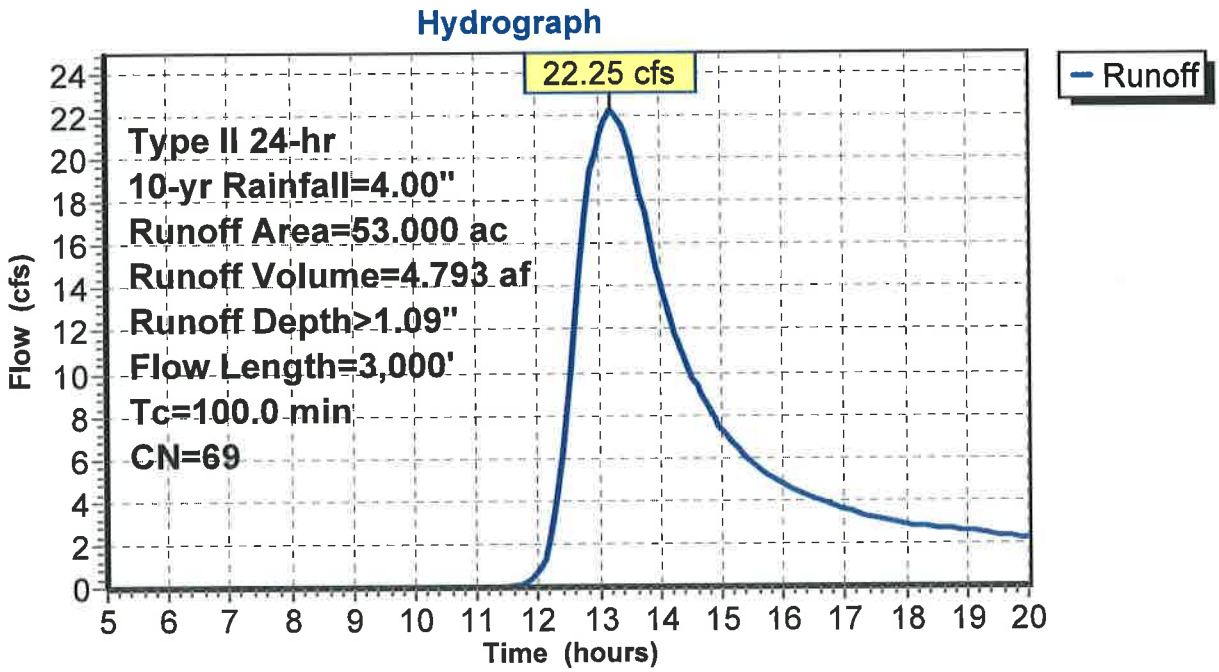
Runoff = 22.25 cfs @ 13.22 hrs, Volume= 4.793 af, Depth> 1.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
53.000	69	Pasture/grassland/range, Fair, HSG B
53.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
100.0	3,000		0.50		**Direct Entry,**

Subcatchment 5S: S Central



Summary for Subcatchment 6S: SE

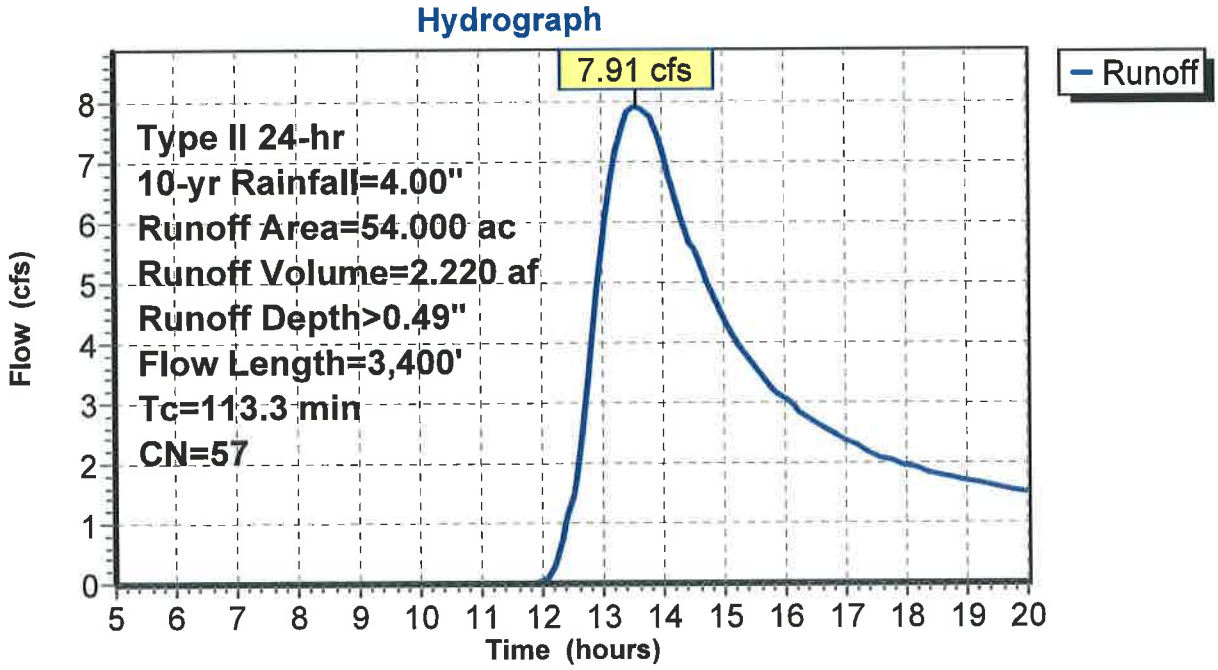
Runoff = 7.91 cfs @ 13.59 hrs, Volume= 2.220 af, Depth> 0.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
32.400	49	Pasture/grassland/range, Fair, HSG A
21.600	69	Pasture/grassland/range, Fair, HSG B
54.000	57	Weighted Average
54.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 6S: SE



Summary for Subcatchment 7S: NE

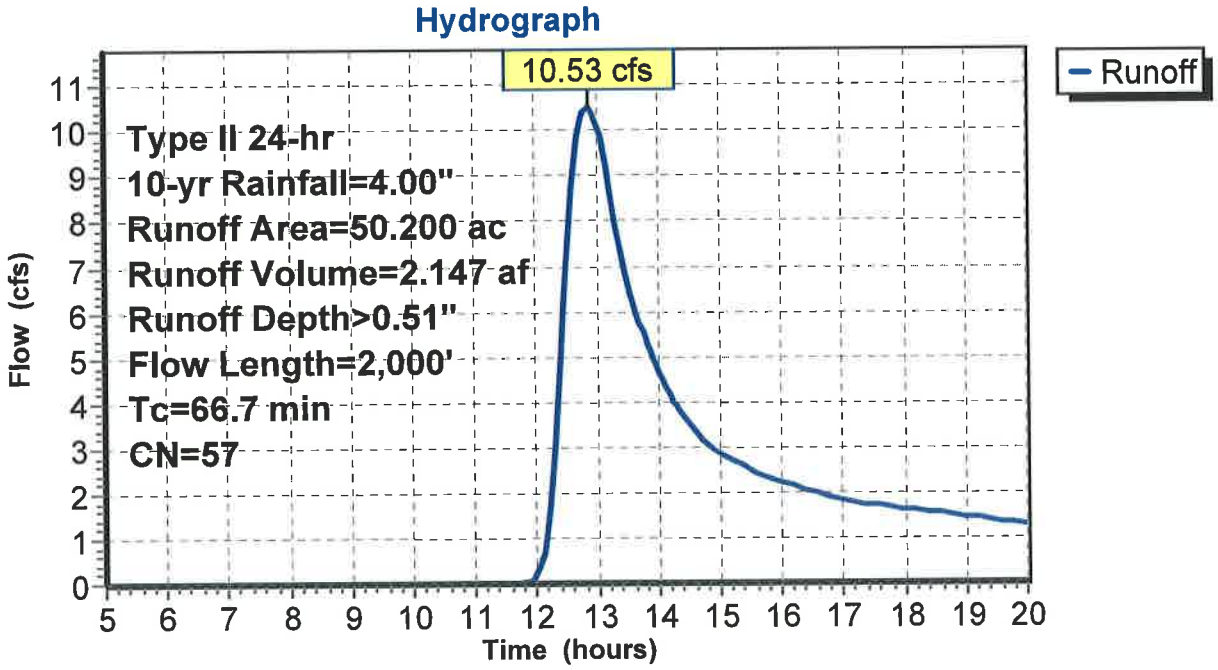
Runoff = 10.53 cfs @ 12.86 hrs, Volume= 2.147 af, Depth> 0.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.00"

Area (ac)	CN	Description
30.100	49	Pasture/grassland/range, Fair, HSG A
20.100	69	Pasture/grassland/range, Fair, HSG B
50.200	57	Weighted Average
50.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 7S: NE



Summary for Reach 7R: New swale

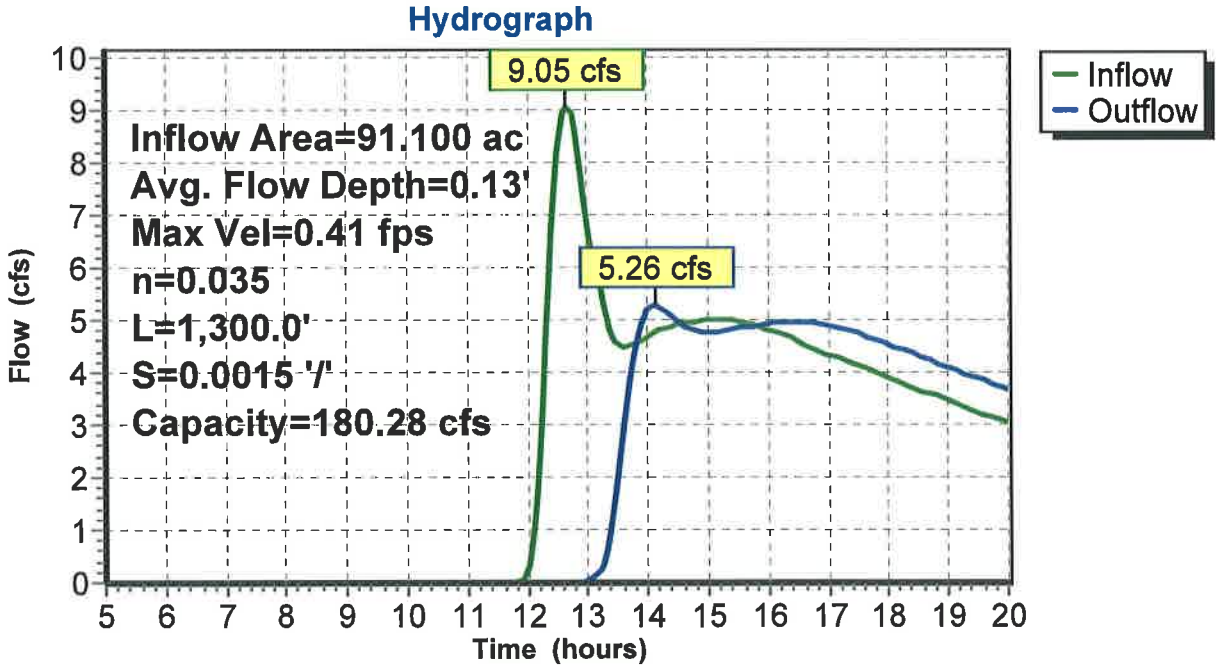
Inflow Area = 91.100 ac, 0.00% Impervious, Inflow Depth > 0.40" for 10-yr event
Inflow = 9.05 cfs @ 12.66 hrs, Volume= 3.025 af
Outflow = 5.26 cfs @ 14.14 hrs, Volume= 2.486 af, Atten= 42%, Lag= 88.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.41 fps, Min. Travel Time= 52.8 min
Avg. Velocity = 0.36 fps, Avg. Travel Time= 60.5 min

Peak Storage= 16,682 cf @ 13.25 hrs
Average Depth at Peak Storage= 0.13'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 180.28 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 1,300.0' Slope= 0.0015 '/'
Inlet Invert= 1,201.00', Outlet Invert= 1,199.00'

Reach 7R: New swale



Summary for Reach 8R: New swale to river

Inflow Area = 50.200 ac, 0.00% Impervious, Inflow Depth > 0.51" for 10-yr event
Inflow = 10.53 cfs @ 12.86 hrs, Volume= 2.147 af
Outflow = 9.51 cfs @ 13.42 hrs, Volume= 2.037 af, Atten= 10%, Lag= 33.5 min

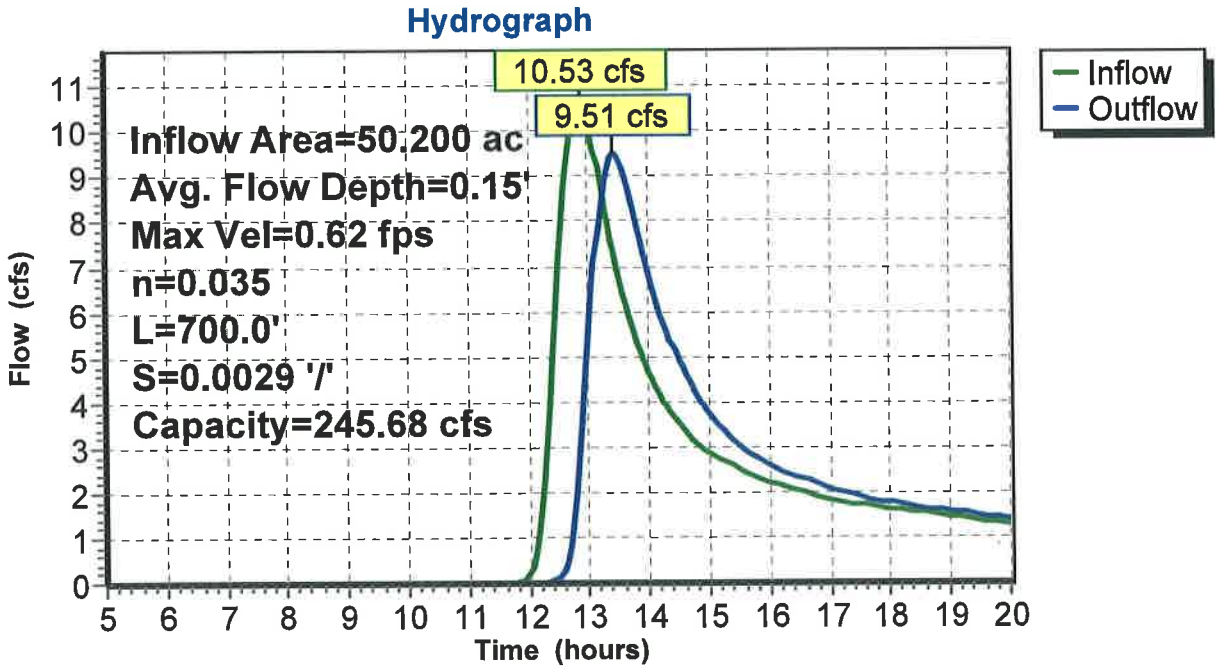
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.62 fps, Min. Travel Time= 18.7 min
Avg. Velocity = 0.37 fps, Avg. Travel Time= 31.2 min

Peak Storage= 10,678 cf @ 13.11 hrs
Average Depth at Peak Storage= 0.15'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 245.68 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 700.0' Slope= 0.0029 '/'
Inlet Invert= 1,200.00', Outlet Invert= 1,198.00'

‡

Reach 8R: New swale to river



Summary for Reach 9R: New swale to river

Inflow Area = 144.100 ac, 0.00% Impervious, Inflow Depth > 0.61" for 10-yr event
Inflow = 22.83 cfs @ 13.45 hrs, Volume= 7.279 af
Outflow = 21.30 cfs @ 14.28 hrs, Volume= 6.618 af, Atten= 7%, Lag= 49.5 min

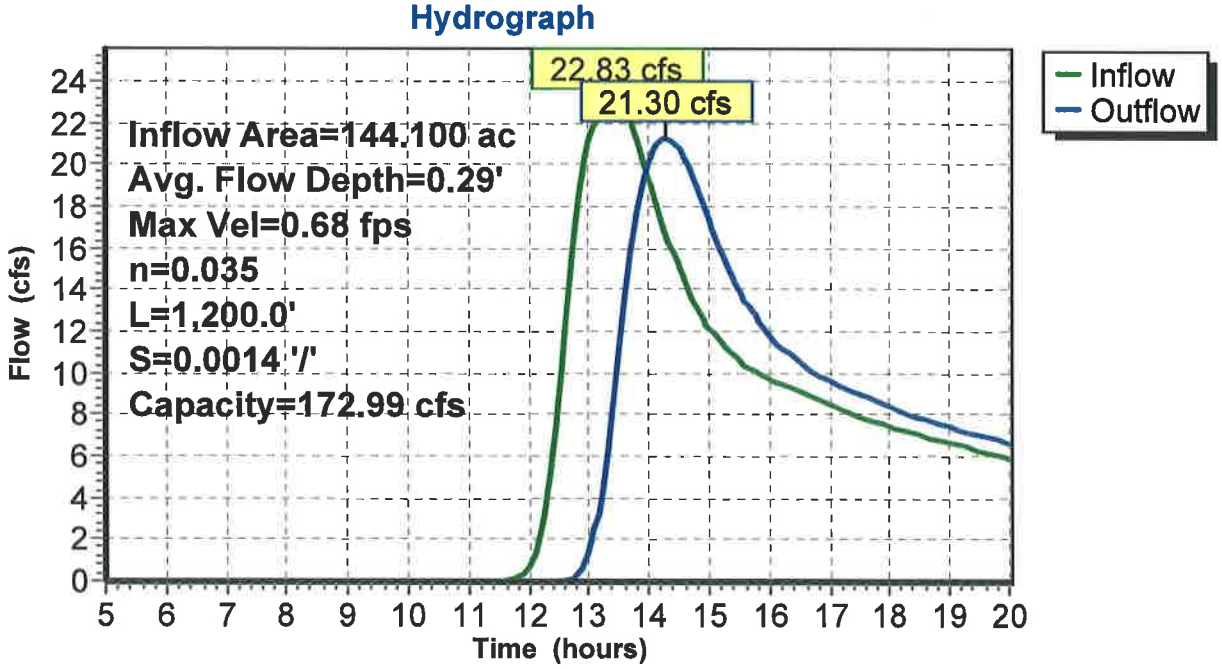
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.68 fps, Min. Travel Time= 29.3 min
Avg. Velocity = 0.46 fps, Avg. Travel Time= 43.9 min

Peak Storage= 37,449 cf @ 13.79 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 172.99 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 1,200.0' Slope= 0.0014 '/'
Inlet Invert= 1,198.70', Outlet Invert= 1,197.00'

‡

Reach 9R: New swale to river



Summary for Pond 1P: NE ditch

Inflow Area = 47.200 ac, 0.00% Impervious, Inflow Depth > 0.51" for 10-yr event
Inflow = 9.90 cfs @ 12.86 hrs, Volume= 2.018 af
Outflow = 9.88 cfs @ 12.89 hrs, Volume= 2.016 af, Atten= 0%, Lag= 1.6 min
Primary = 9.88 cfs @ 12.89 hrs, Volume= 2.016 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.54' @ 12.89 hrs Surf.Area= 806 sf Storage= 762 cf

Plug-Flow detention time= 1.3 min calculated for 2.010 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (884.1 - 883.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.65'	215,897 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

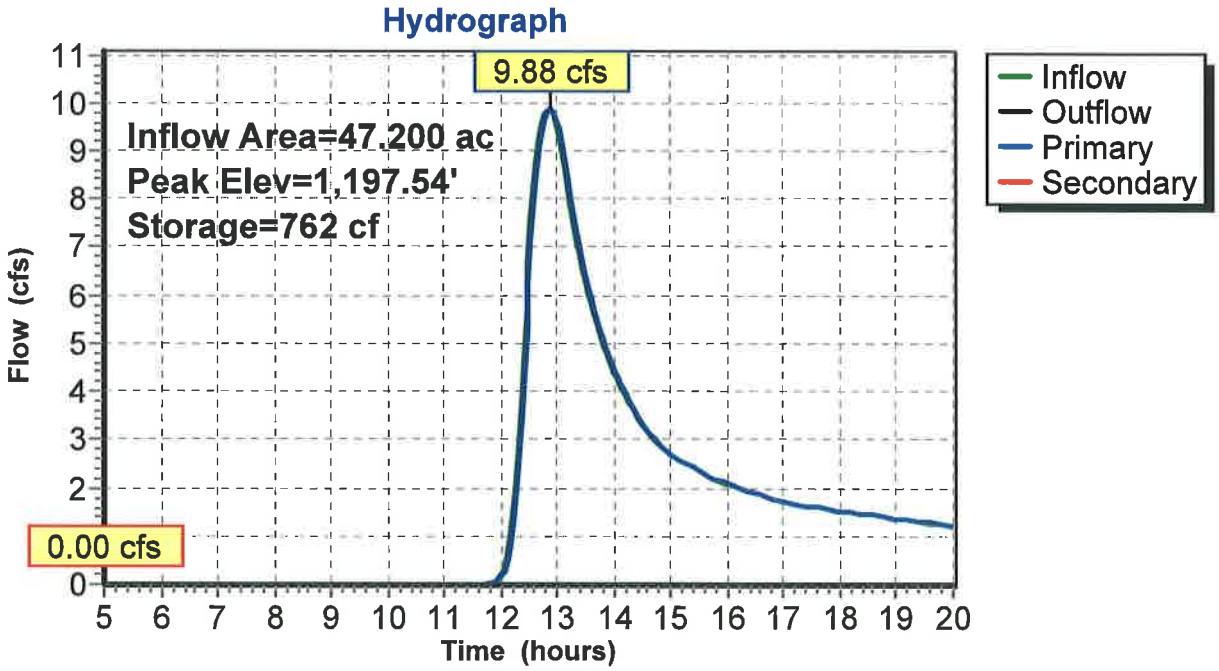
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.65	0	0	0
1,198.00	1,000	1,175	1,175
1,199.00	6,407	3,704	4,878
1,200.00	12,815	9,611	14,489
1,201.00	390,000	201,408	215,897

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.65'	**30.0" Round Culvert** L= 24.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.65' / 1,195.65' S= 0.0000 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,200.20'	**150.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=9.87 cfs @ 12.89 hrs HW=1,197.54' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 9.87 cfs @ 3.43 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.65' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: NE ditch



Summary for Pond 3P: S Central ditch

Inflow Area = 69.000 ac, 0.00% Impervious, Inflow Depth > 1.12" for 10-yr event
Inflow = 46.77 cfs @ 12.58 hrs, Volume= 6.413 af
Outflow = 46.73 cfs @ 12.59 hrs, Volume= 6.352 af, Atten= 0%, Lag= 0.7 min
Primary = 17.06 cfs @ 12.59 hrs, Volume= 4.829 af
Secondary = 29.67 cfs @ 12.59 hrs, Volume= 1.523 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.96' @ 12.59 hrs Surf.Area= 14,586 sf Storage= 18,502 cf

Plug-Flow detention time= 12.6 min calculated for 6.331 af (99% of inflow)
Center-of-Mass det. time= 9.3 min (853.5 - 844.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.30'	74,844 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.30	0	0	0
1,196.50	5,940	3,564	3,564
1,197.50	11,880	8,910	12,474
1,198.50	17,820	14,850	27,324
1,200.50	29,700	47,520	74,844

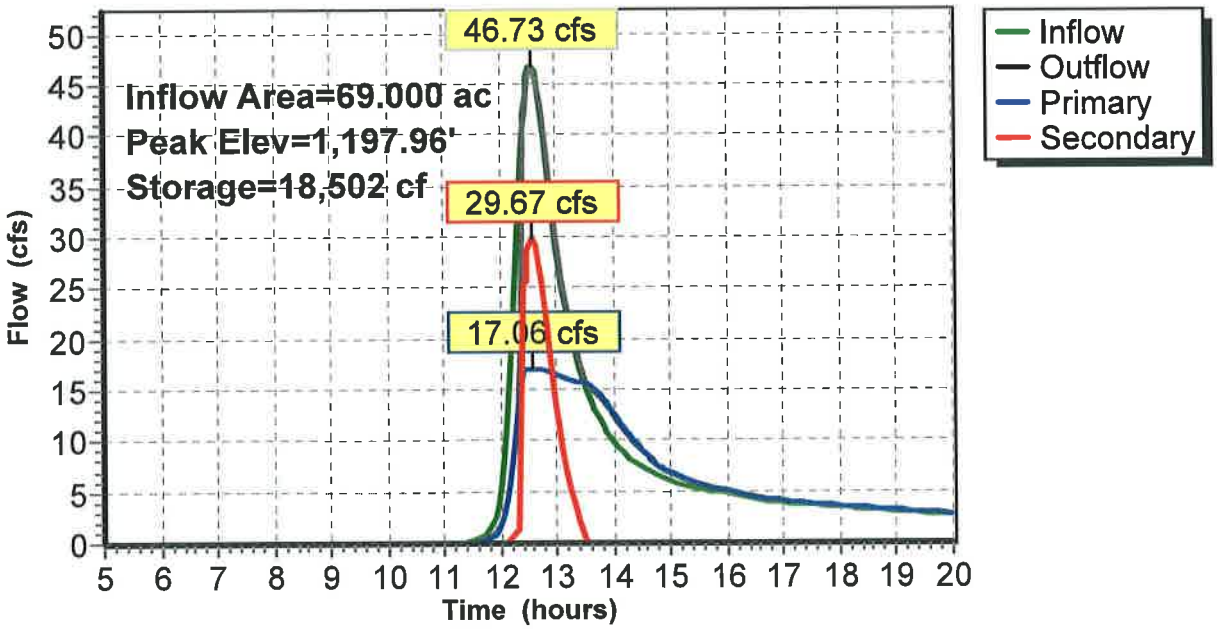
Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.48'	**30.0" Round Culvert** L= 20.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.37' / 1,195.48' S= -0.0055 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,197.80'	**180.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=17.06 cfs @ 12.59 hrs HW=1,197.96' (Free Discharge)
↑**1=Culvert** (Barrel Controls 17.06 cfs @ 4.18 fps)

Secondary OutFlow Max=29.52 cfs @ 12.59 hrs HW=1,197.96' (Free Discharge)
↑**2=Broad-Crested Rectangular Weir** (Weir Controls 29.52 cfs @ 1.06 fps)

Pond 3P: S Central ditch

Hydrograph



Summary for Pond 4P: SW ditch

Inflow Area = 129.000 ac, 0.00% Impervious, Inflow Depth > 0.94" for 10-yr event
Inflow = 74.44 cfs @ 12.52 hrs, Volume= 10.096 af
Outflow = 70.21 cfs @ 12.64 hrs, Volume= 10.096 af, Atten= 6%, Lag= 7.6 min
Primary = 70.21 cfs @ 12.64 hrs, Volume= 10.096 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,196.85' @ 12.64 hrs Surf.Area= 19,535 sf Storage= 25,889 cf

Plug-Flow detention time= 3.4 min calculated for 10.062 af (100% of inflow)
Center-of-Mass det. time= 3.4 min (855.8 - 852.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,194.20'	92,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,194.20	0	0	0
1,195.20	7,370	3,685	3,685
1,196.20	14,740	11,055	14,740
1,197.20	22,110	18,425	33,165
1,199.20	36,850	58,960	92,125

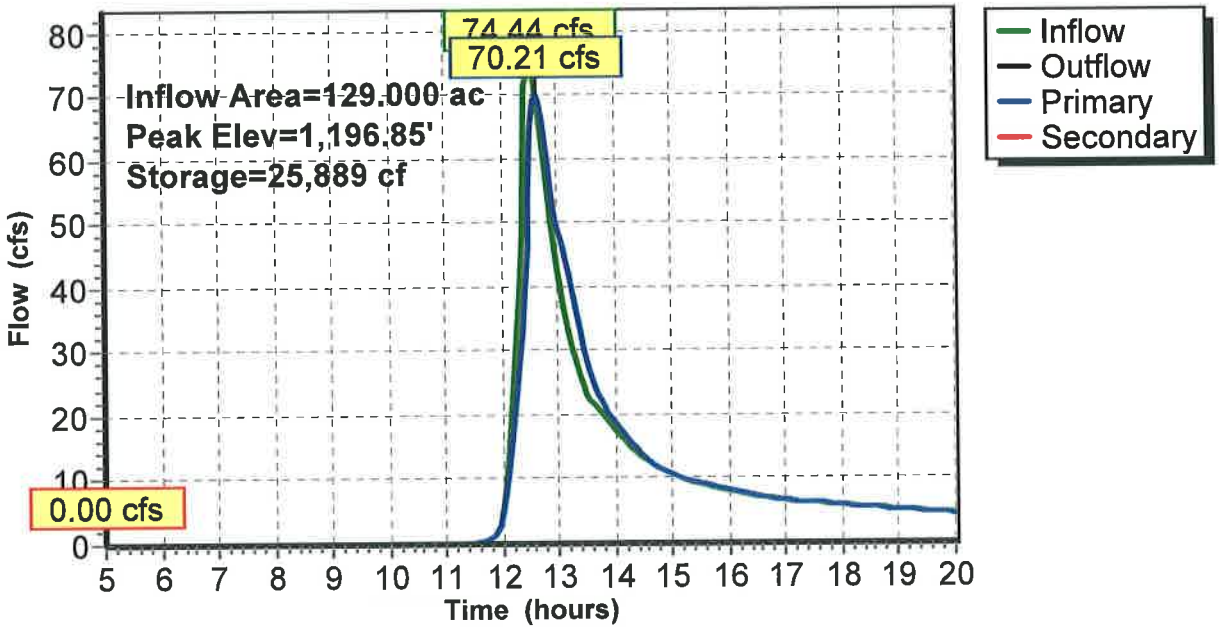
Device	Routing	Invert	Outlet Devices
#1	Primary	1,194.00'	**Special & User-Defined** Head (feet) 0.00 2.60 3.22 3.49 3.70 3.80 Disch. (cfs) 0.000 50.000 100.000 200.000 350.000 500.000
#2	Secondary	1,197.30'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=70.07 cfs @ 12.64 hrs HW=1,196.85' (Free Discharge)
↑—**1=Special & User-Defined** (Custom Controls 70.07 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,194.20' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 4P: SW ditch

Hydrograph



Summary for Pond 6P: Road Ditch

Inflow Area = 54.000 ac, 0.00% Impervious, Inflow Depth > 0.49" for 10-yr event
Inflow = 7.91 cfs @ 13.59 hrs, Volume= 2.220 af
Outflow = 3.25 cfs @ 15.79 hrs, Volume= 1.422 af, Atten= 59%, Lag= 132.1 min
Primary = 3.25 cfs @ 15.79 hrs, Volume= 1.422 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,203.04' @ 15.79 hrs Surf.Area= 46,794 sf Storage= 44,292 cf

Plug-Flow detention time= 169.6 min calculated for 1.418 af (64% of inflow)
Center-of-Mass det. time= 94.0 min (1,008.1 - 914.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,200.00'	263,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

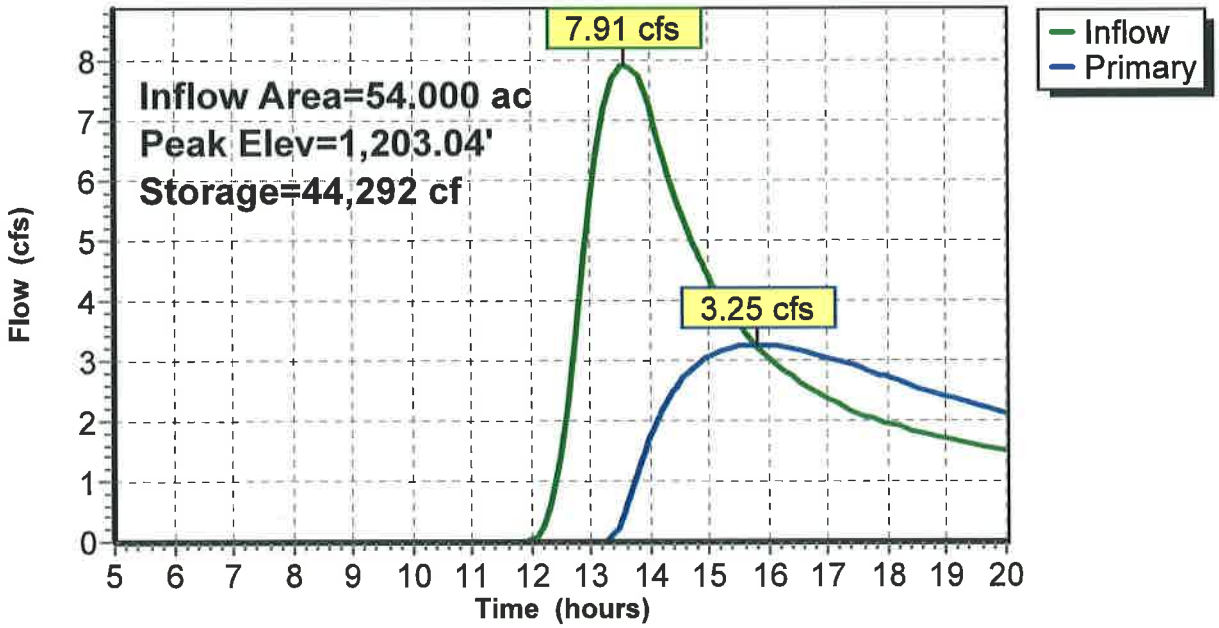
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,200.00	1,000	0	0
1,202.00	12,300	13,300	13,300
1,203.00	46,000	29,150	42,450
1,203.80	62,000	43,200	85,650
1,206.00	100,000	178,200	263,850

Device	Routing	Invert	Outlet Devices
#1	Primary	1,202.06'	**18.0" Round Culvert** L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,200.67' / 1,202.06' S= -0.0397 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf
#2	Primary	1,203.80'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=3.25 cfs @ 15.79 hrs HW=1,203.04' (Free Discharge)
1=Culvert (Inlet Controls 3.25 cfs @ 2.66 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 6P: Road Ditch

Hydrograph



Summary for Subcatchment 1S: NE

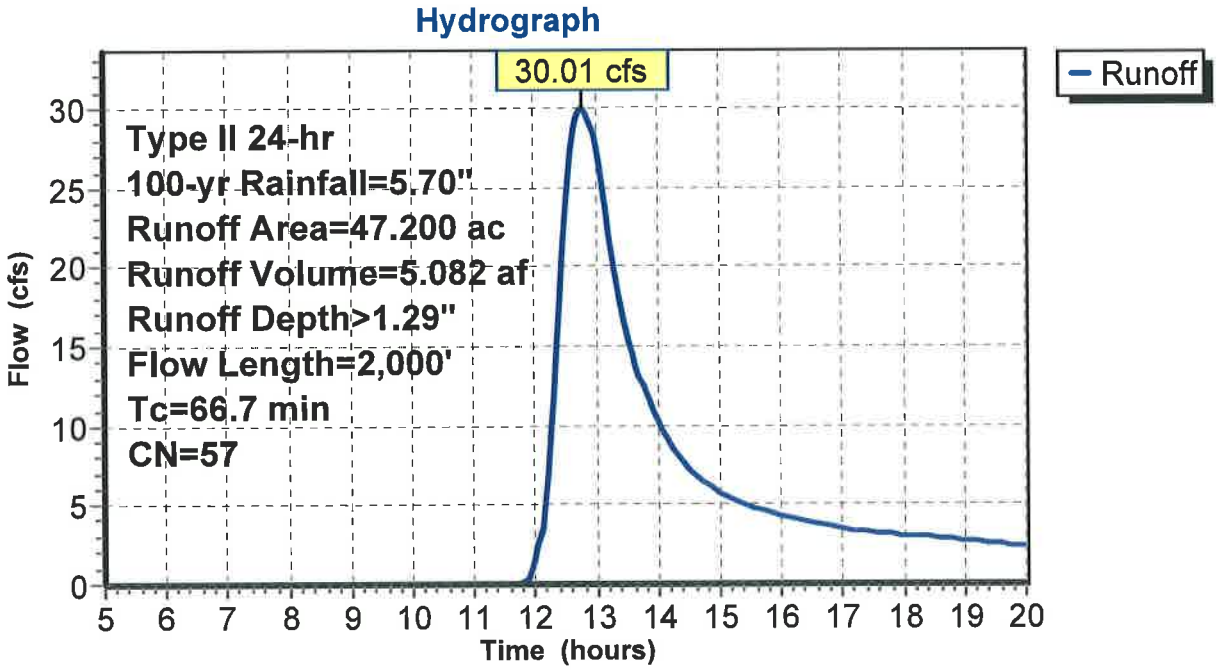
Runoff = 30.01 cfs @ 12.80 hrs, Volume= 5.082 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
28.300	49	Pasture/grassland/range, Fair, HSG A
18.900	69	Pasture/grassland/range, Fair, HSG B
47.200	57	Weighted Average
47.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 1S: NE



Summary for Subcatchment 2S: SE

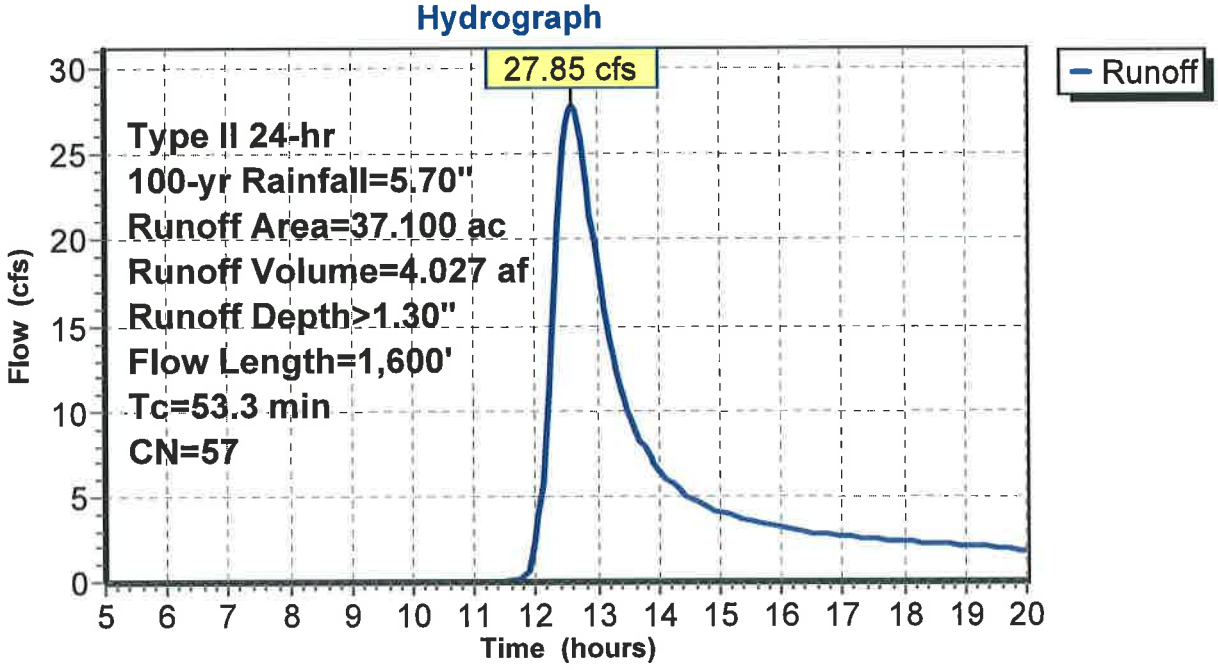
Runoff = 27.85 cfs @ 12.60 hrs, Volume= 4.027 af, Depth> 1.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
22.300	49	Pasture/grassland/range, Fair, HSG A
14.800	69	Pasture/grassland/range, Fair, HSG B
37.100	57	Weighted Average
37.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
53.3	1,600		0.50		**Direct Entry,**

Subcatchment 2S: SE



Summary for Subcatchment 3S: S Central

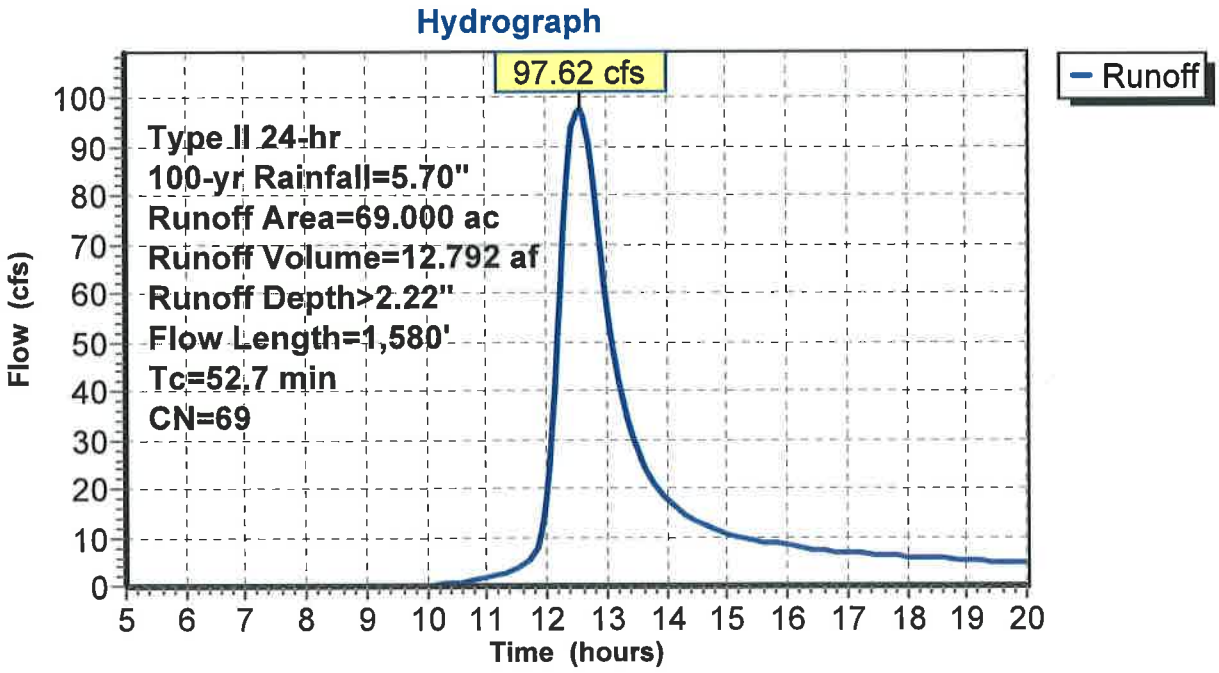
Runoff = 97.62 cfs @ 12.55 hrs, Volume= 12.792 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
69.000	69	Pasture/grassland/range, Fair, HSG B
69.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
52.7	1,580		0.50		**Direct Entry,**

Subcatchment 3S: S Central



Summary for Subcatchment 4S: SW

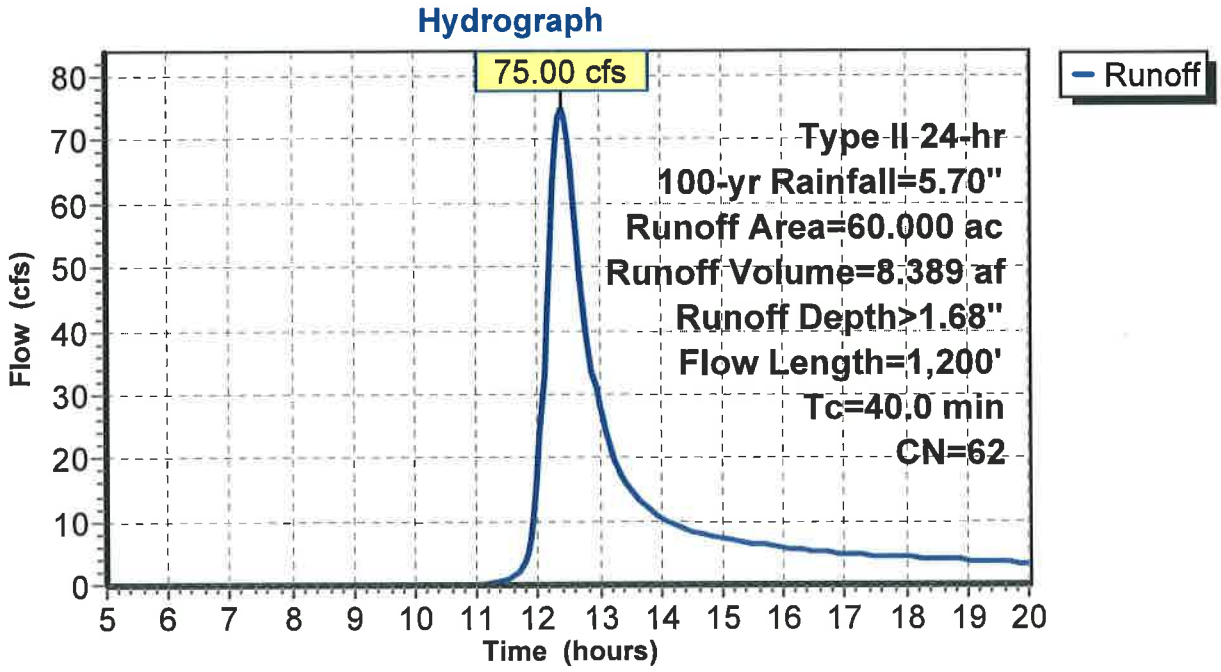
Runoff = 75.00 cfs @ 12.40 hrs, Volume= 8.389 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
20.000	49	Pasture/grassland/range, Fair, HSG A
40.000	69	Pasture/grassland/range, Fair, HSG B
60.000	62	Weighted Average
60.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.0	1,200		0.50		**Direct Entry,**

Subcatchment 4S: SW



Summary for Subcatchment 5S: S Central

Runoff = 46.57 cfs @ 13.20 hrs, Volume= 9.599 af, Depth> 2.17"

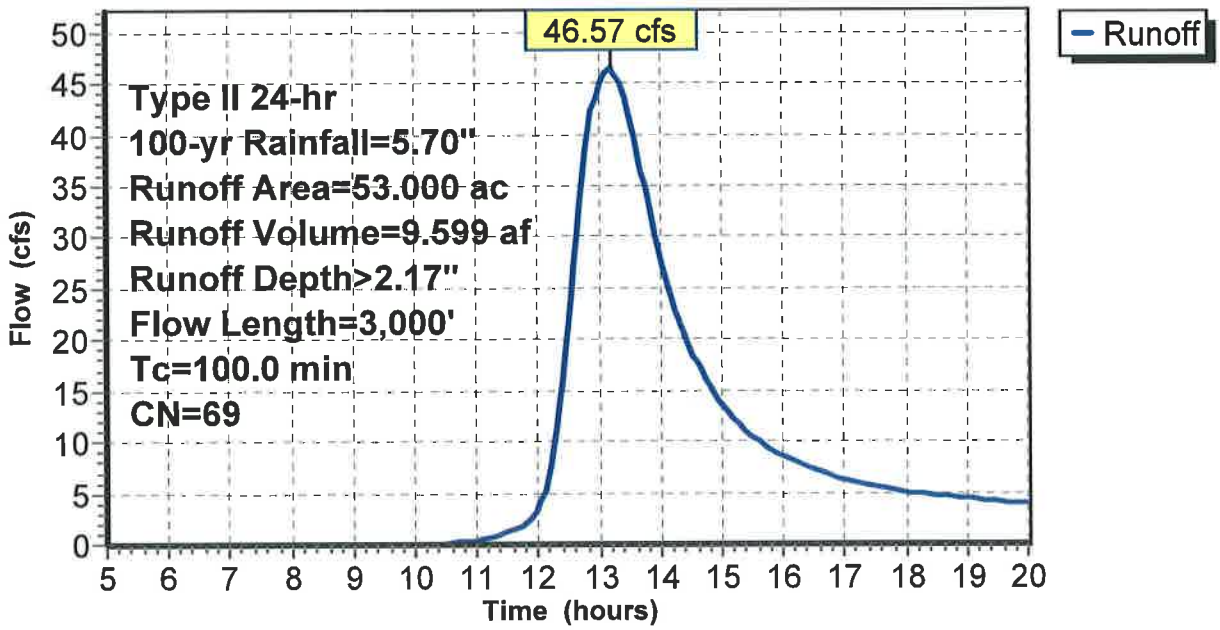
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
53.000	69	Pasture/grassland/range, Fair, HSG B
53.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
100.0	3,000		0.50		**Direct Entry,**

Subcatchment 5S: S Central

Hydrograph



Summary for Subcatchment 6S: SE

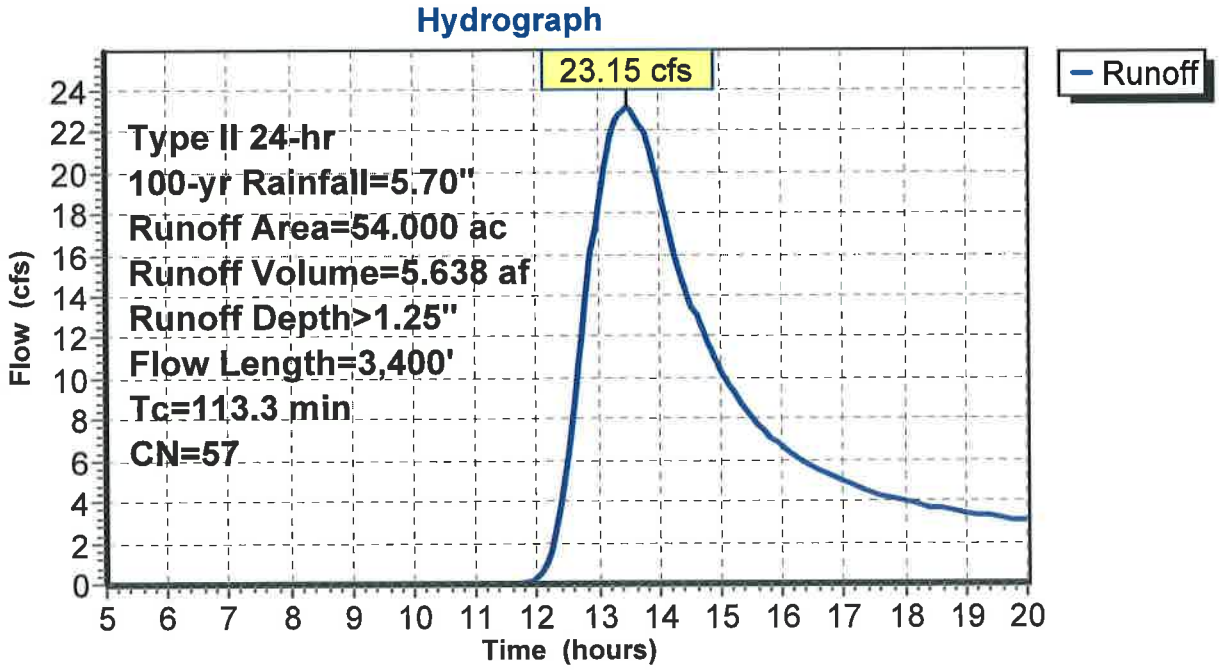
Runoff = 23.15 cfs @ 13.47 hrs, Volume= 5.638 af, Depth> 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
32.400	49	Pasture/grassland/range, Fair, HSG A
21.600	69	Pasture/grassland/range, Fair, HSG B
54.000	57	Weighted Average
54.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
113.3	3,400		0.50		**Direct Entry,**

Subcatchment 6S: SE



Summary for Subcatchment 7S: NE

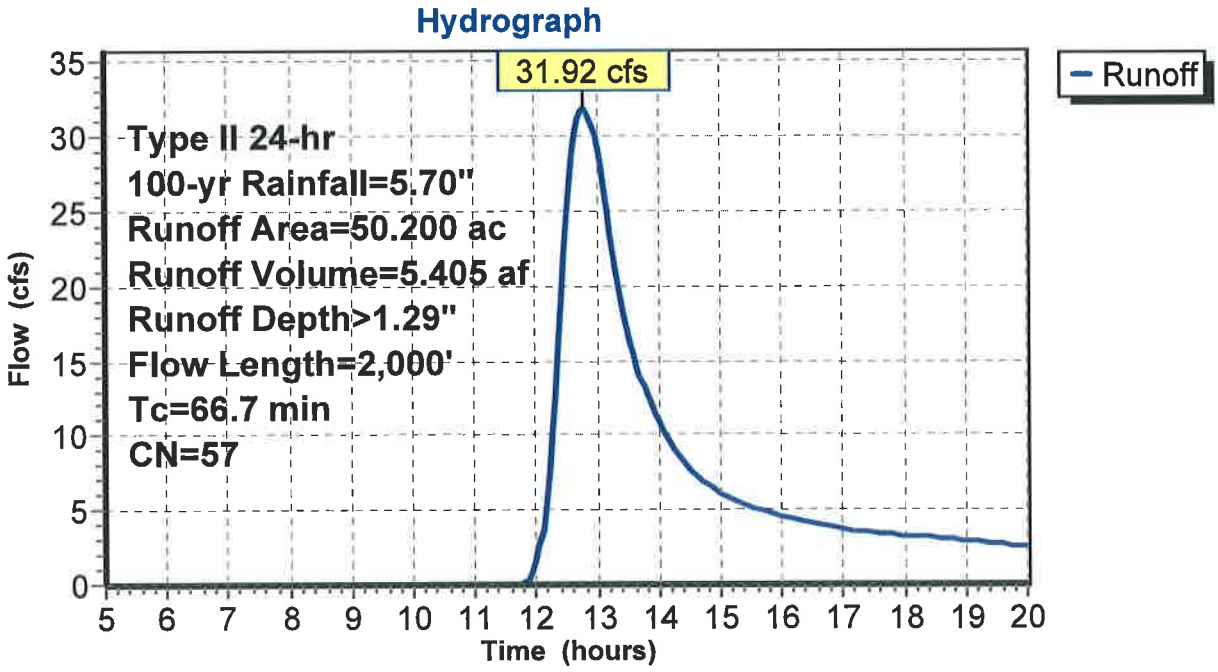
Runoff = 31.92 cfs @ 12.80 hrs, Volume= 5.405 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.70"

Area (ac)	CN	Description
30.100	49	Pasture/grassland/range, Fair, HSG A
20.100	69	Pasture/grassland/range, Fair, HSG B
50.200	57	Weighted Average
50.200		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
66.7	2,000		0.50		**Direct Entry,**

Subcatchment 7S: NE



Summary for Reach 7R: New swale

Inflow Area = 91.100 ac, 0.00% Impervious, Inflow Depth > 1.09" for 100-yr event
Inflow = 27.85 cfs @ 12.60 hrs, Volume= 8.285 af
Outflow = 19.91 cfs @ 13.51 hrs, Volume= 7.498 af, Atten= 28%, Lag= 54.5 min

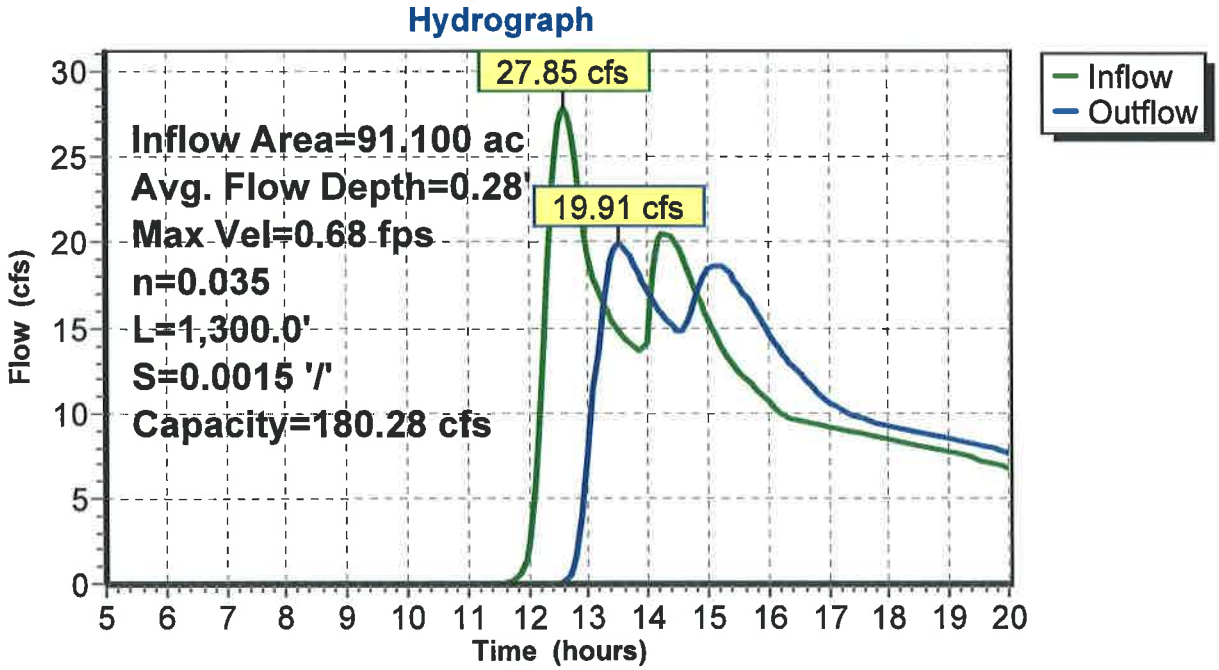
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.68 fps, Min. Travel Time= 31.7 min
Avg. Velocity = 0.52 fps, Avg. Travel Time= 41.8 min

Peak Storage= 37,926 cf @ 12.98 hrs
Average Depth at Peak Storage= 0.28'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 180.28 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 1,300.0' Slope= 0.0015 '/'
Inlet Invert= 1,201.00', Outlet Invert= 1,199.00'

‡

Reach 7R: New swale



Summary for Reach 8R: New swale to river

Inflow Area = 50.200 ac, 0.00% Impervious, Inflow Depth > 1.29" for 100-yr event
Inflow = 31.92 cfs @ 12.80 hrs, Volume= 5.405 af
Outflow = 30.45 cfs @ 13.14 hrs, Volume= 5.250 af, Atten= 5%, Lag= 20.6 min

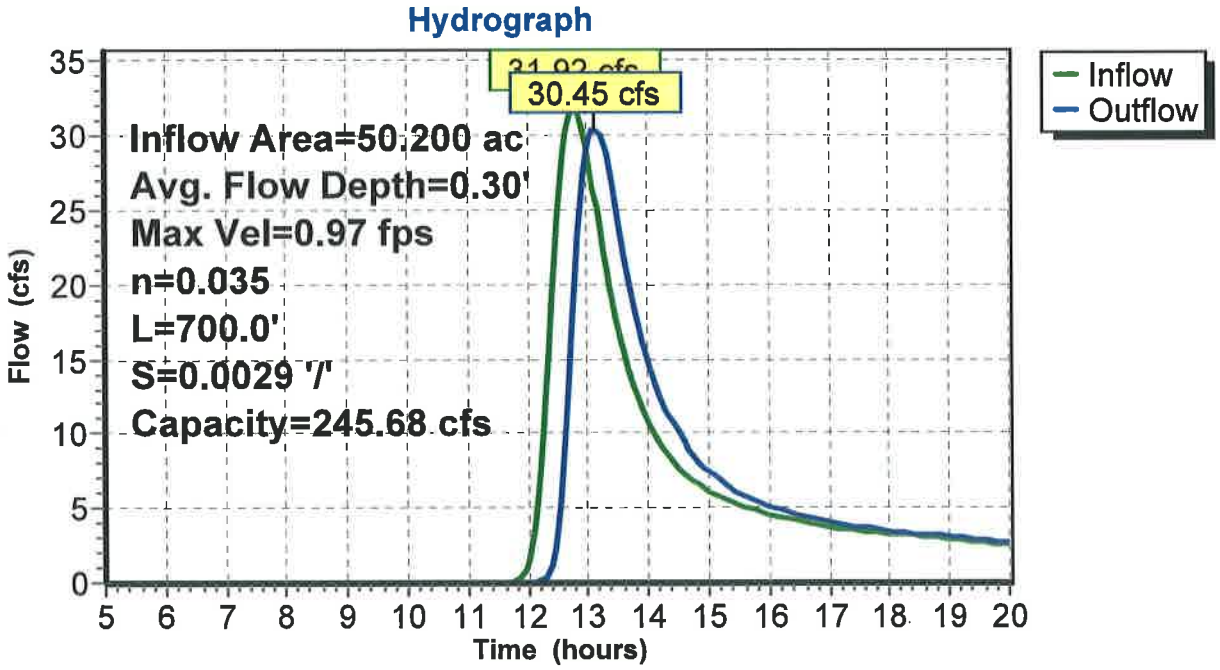
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.97 fps, Min. Travel Time= 12.0 min
Avg. Velocity = 0.51 fps, Avg. Travel Time= 23.0 min

Peak Storage= 21,935 cf @ 12.94 hrs
Average Depth at Peak Storage= 0.30'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 245.68 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 700.0' Slope= 0.0029 '/'
Inlet Invert= 1,200.00', Outlet Invert= 1,198.00'

‡

Reach 8R: New swale to river



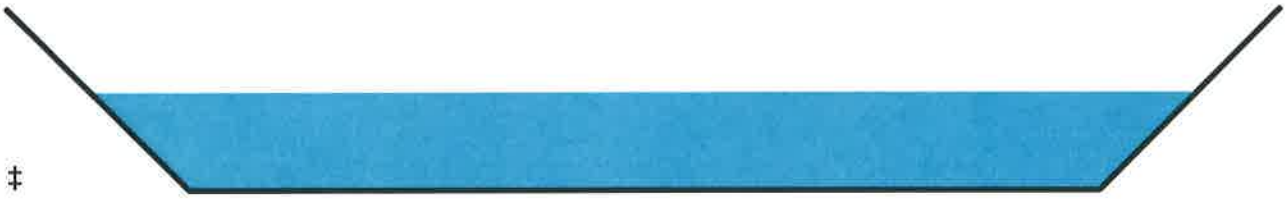
Summary for Reach 9R: New swale to river

Inflow Area = 144.100 ac, 0.00% Impervious, Inflow Depth > 1.42" for 100-yr event
Inflow = 63.92 cfs @ 13.35 hrs, Volume= 17.096 af
Outflow = 59.75 cfs @ 13.92 hrs, Volume= 16.160 af, Atten= 7%, Lag= 34.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.00 fps, Min. Travel Time= 20.1 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 36.2 min

Peak Storage= 71,952 cf @ 13.58 hrs
Average Depth at Peak Storage= 0.54'
Bank-Full Depth= 1.00' Flow Area= 120.0 sf, Capacity= 172.99 cfs

100.00' x 1.00' deep channel, n= 0.035
Side Slope Z-value= 20.0 '/' Top Width= 140.00'
Length= 1,200.0' Slope= 0.0014 '/'
Inlet Invert= 1,198.70', Outlet Invert= 1,197.00'



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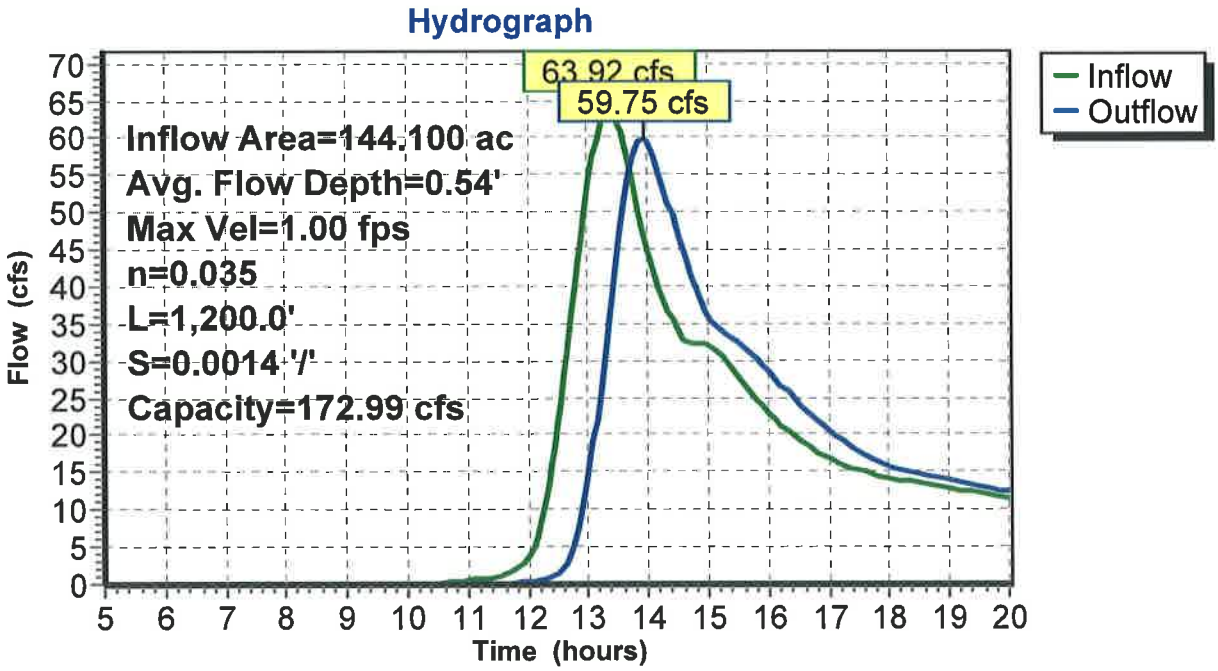
Reach 9R: New swale to river



Summary for Pond 1P: NE ditch

Inflow Area = 47.200 ac, 0.00% Impervious, Inflow Depth > 1.29" for 100-yr event
Inflow = 30.01 cfs @ 12.80 hrs, Volume= 5.082 af
Outflow = 27.89 cfs @ 12.98 hrs, Volume= 5.078 af, Atten= 7%, Lag= 10.9 min
Primary = 27.89 cfs @ 12.98 hrs, Volume= 5.078 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,199.48' @ 12.98 hrs Surf.Area= 9,499 sf Storage= 8,716 cf

Plug-Flow detention time= 2.5 min calculated for 5.061 af (100% of inflow)
Center-of-Mass det. time= 2.2 min (863.9 - 861.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.65'	215,897 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

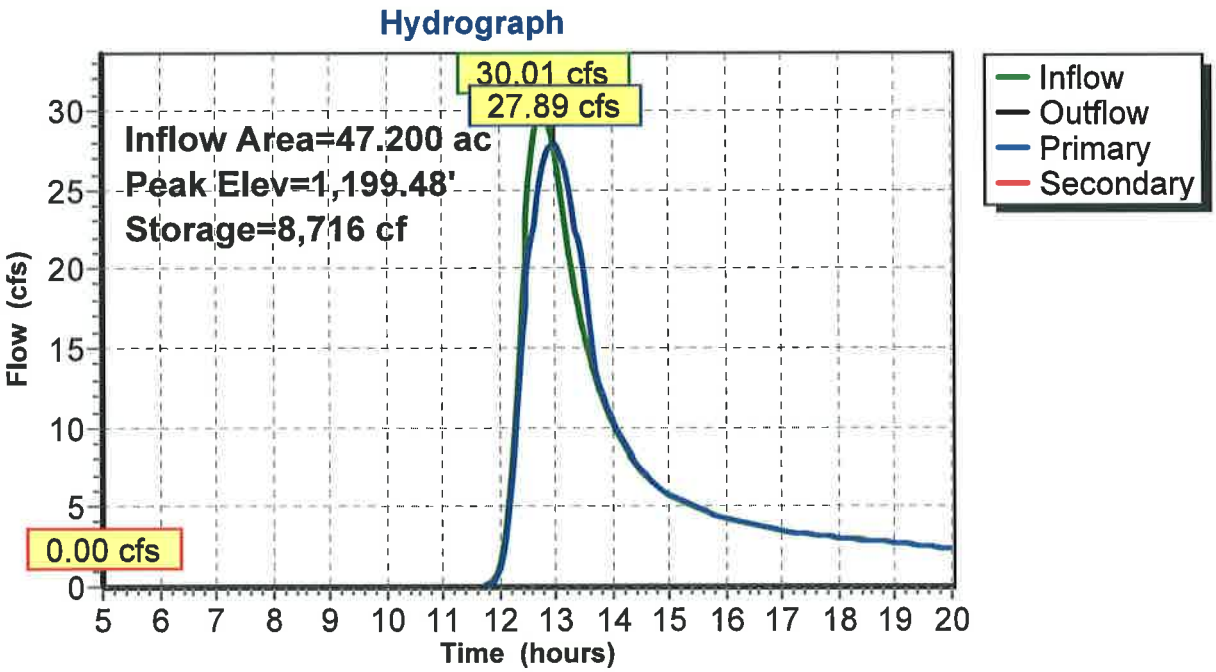
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.65	0	0	0
1,198.00	1,000	1,175	1,175
1,199.00	6,407	3,704	4,878
1,200.00	12,815	9,611	14,489
1,201.00	390,000	201,408	215,897

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.65'	**30.0" Round Culvert** L= 24.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.65' / 1,195.65' S= 0.0000 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,200.20'	**150.0' long x 8.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=27.87 cfs @ 12.98 hrs HW=1,199.48' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 27.87 cfs @ 5.68 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,195.65' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 1P: NE ditch



Summary for Pond 3P: S Central ditch

Inflow Area = 69.000 ac, 0.00% Impervious, Inflow Depth > 2.22" for 100-yr event
Inflow = 97.62 cfs @ 12.55 hrs, Volume= 12.792 af
Outflow = 97.59 cfs @ 12.56 hrs, Volume= 12.692 af, Atten= 0%, Lag= 0.6 min
Primary = 18.46 cfs @ 12.56 hrs, Volume= 7.138 af
Secondary = 79.13 cfs @ 12.56 hrs, Volume= 5.554 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,198.10' @ 12.56 hrs Surf.Area= 15,435 sf Storage= 20,649 cf

Plug-Flow detention time= 9.4 min calculated for 12.650 af (99% of inflow)
Center-of-Mass det. time= 6.6 min (837.3 - 830.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,195.30'	74,844 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

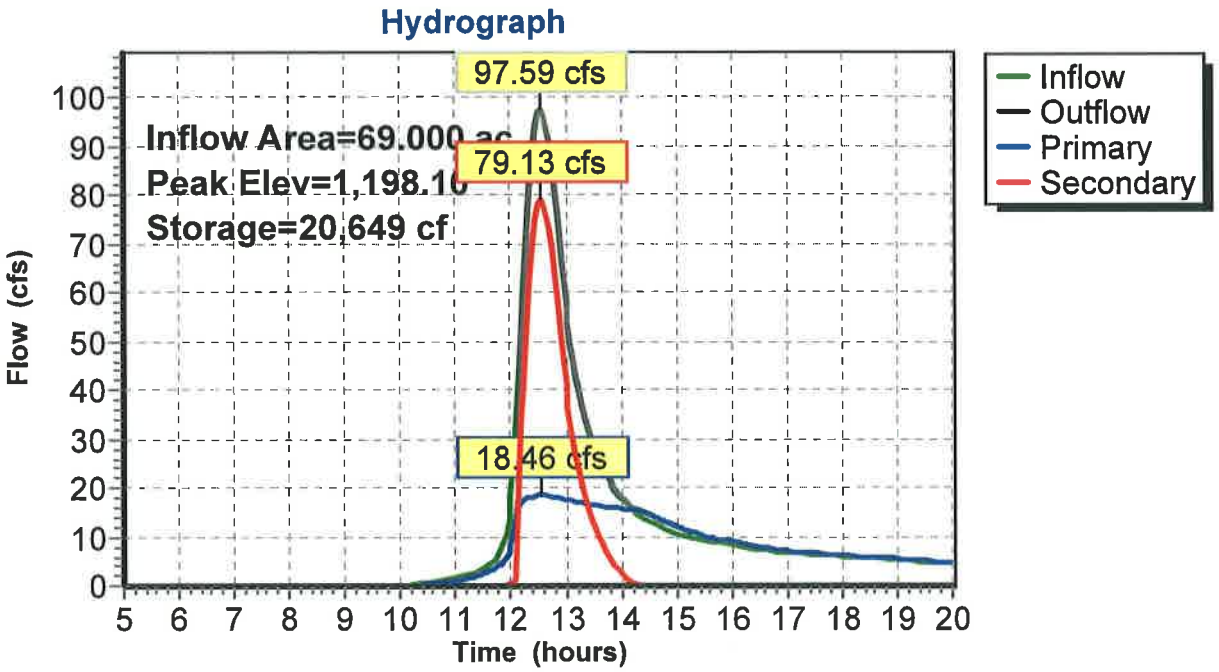
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,195.30	0	0	0
1,196.50	5,940	3,564	3,564
1,197.50	11,880	8,910	12,474
1,198.50	17,820	14,850	27,324
1,200.50	29,700	47,520	74,844

Device	Routing	Invert	Outlet Devices
#1	Primary	1,195.48'	**30.0" Round Culvert** L= 20.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,195.37' / 1,195.48' S= -0.0055 '/' Cc= 0.900 n= 0.024, Flow Area= 4.91 sf
#2	Secondary	1,197.80'	**180.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=18.45 cfs @ 12.56 hrs HW=1,198.10' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 18.45 cfs @ 4.29 fps)

Secondary OutFlow Max=78.86 cfs @ 12.56 hrs HW=1,198.10' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 78.86 cfs @ 1.47 fps)

Pond 3P: S Central ditch



Summary for Pond 4P: SW ditch

Inflow Area = 129.000 ac, 0.00% Impervious, Inflow Depth > 1.96" for 100-yr event
Inflow = 167.15 cfs @ 12.48 hrs, Volume= 21.081 af
Outflow = 166.92 cfs @ 12.49 hrs, Volume= 21.077 af, Atten= 0%, Lag= 0.6 min
Primary = 162.56 cfs @ 12.49 hrs, Volume= 20.973 af
Secondary = 4.36 cfs @ 12.49 hrs, Volume= 0.104 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,197.39' @ 12.49 hrs Surf.Area= 23,502 sf Storage= 37,474 cf

Plug-Flow detention time= 3.8 min calculated for 21.007 af (100% of inflow)
Center-of-Mass det. time= 3.7 min (839.3 - 835.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,194.20'	92,125 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

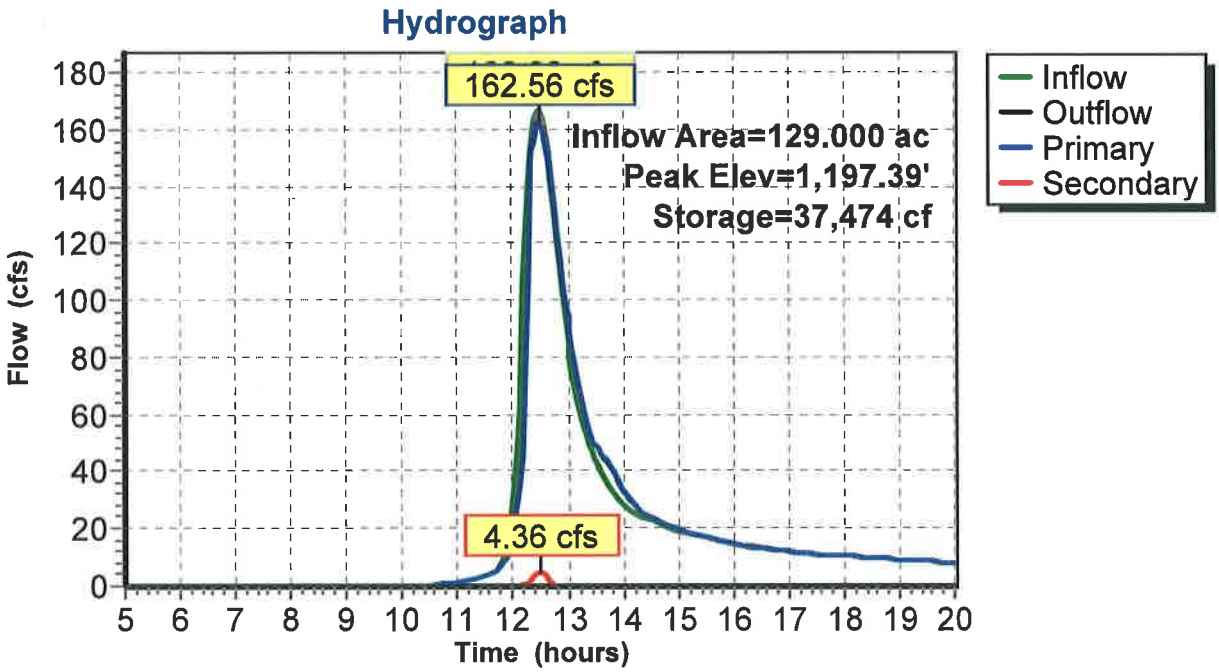
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,194.20	0	0	0
1,195.20	7,370	3,685	3,685
1,196.20	14,740	11,055	14,740
1,197.20	22,110	18,425	33,165
1,199.20	36,850	58,960	92,125

Device	Routing	Invert	Outlet Devices
#1	Primary	1,194.00'	**Special & User-Defined** Head (feet) 0.00 2.60 3.22 3.49 3.70 3.80 Disch. (cfs) 0.000 50.000 100.000 200.000 350.000 500.000
#2	Secondary	1,197.30'	**60.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=162.33 cfs @ 12.49 hrs HW=1,197.39' (Free Discharge)
↑—**1=Special & User-Defined** (Custom Controls 162.33 cfs)

Secondary OutFlow Max=4.22 cfs @ 12.49 hrs HW=1,197.39' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 4.22 cfs @ 0.80 fps)

Pond 4P: SW ditch



Summary for Pond 6P: Road Ditch

Inflow Area = 54.000 ac, 0.00% Impervious, Inflow Depth > 1.25" for 100-yr event
Inflow = 23.15 cfs @ 13.47 hrs, Volume= 5.638 af
Outflow = 15.27 cfs @ 14.34 hrs, Volume= 4.258 af, Atten= 34%, Lag= 52.0 min
Primary = 15.27 cfs @ 14.34 hrs, Volume= 4.258 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,203.90' @ 14.34 hrs Surf.Area= 63,776 sf Storage= 92,115 cf

Plug-Flow detention time= 133.1 min calculated for 4.258 af (76% of inflow)
Center-of-Mass det. time= 77.3 min (972.1 - 894.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,200.00'	263,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

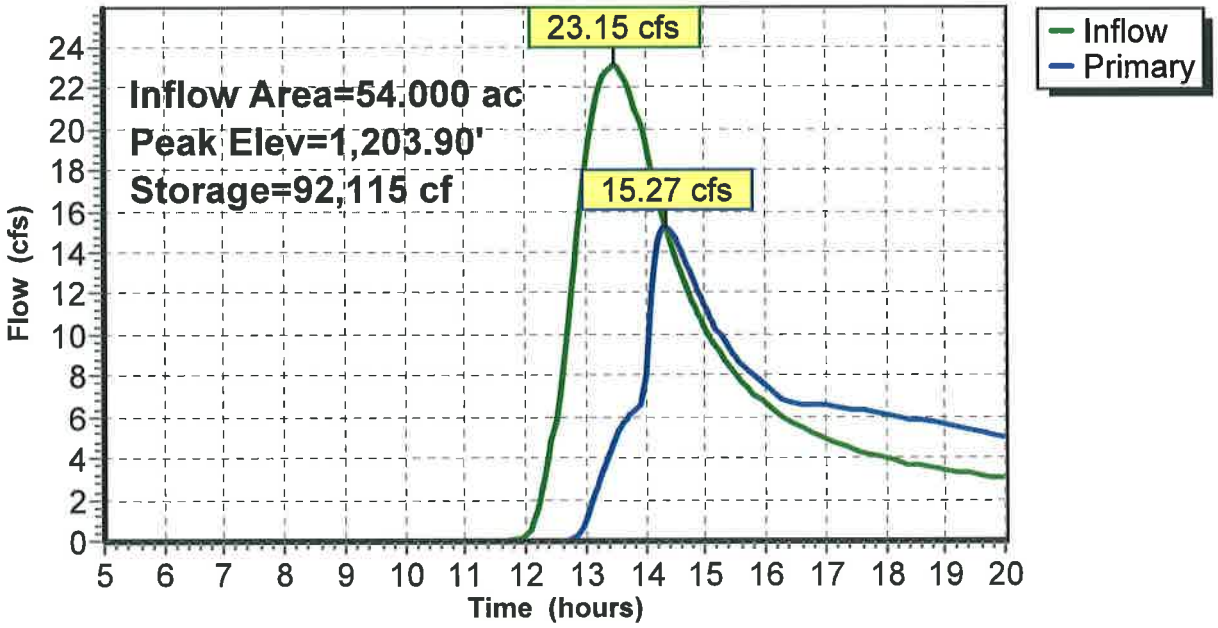
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,200.00	1,000	0	0
1,202.00	12,300	13,300	13,300
1,203.00	46,000	29,150	42,450
1,203.80	62,000	43,200	85,650
1,206.00	100,000	178,200	263,850

Device	Routing	Invert	Outlet Devices
#1	Primary	1,202.06'	**18.0" Round Culvert** L= 35.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 1,200.67' / 1,202.06' S= -0.0397 '/' Cc= 0.900 n= 0.024, Flow Area= 1.77 sf
#2	Primary	1,203.80'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=15.21 cfs @ 14.34 hrs HW=1,203.90' (Free Discharge)
1=Culvert (Inlet Controls 7.02 cfs @ 3.97 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 8.19 cfs @ 0.80 fps)

Pond 6P: Road Ditch

Hydrograph



END OF DOCUMENT

Aitkin County

Board of County Commissioners Agenda Request

6A
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Testimony in Support of Enbridge Pipeline

☑ REGULAR AGENDA	**Action Requested:**	☑ Direction Requested
☐ CONSENT AGENDA	☐ Approve/Deny Motion	☐ Discussion Item
☐ INFORMATION ONLY	☐ Adopt Resolution (attach draft)	☐ Hold Public Hearing*
		**provide copy of hearing notice that was published*

Submitted by: Nathan Burkett	**Department:** Administration
Presenter (Name and Title): Nathan Burkett, County Administrator	**Estimated Time Needed:**

Summary of Issue:

Asking for direction from the Board in developing an outline for testimony in support of the proposed Enbridge Pipeline at the September 11th Public Utilities Commission hearing.

Alternatives, Options, Effects on Others/Comments:

Recommended Action/Motion:

Financial Impact:

Is there a cost associated with this request? ☐ *Yes* ☐ *No*

What is the total cost, with tax and shipping? $

Is this budgeted? ☐ *Yes* ☐ *No* *Please Explain:*

Legally binding agreements must have County Attorney approval prior to submission.

Aitkin County Board of Commissioners
Agenda Request Form

7
Agenda Item #

Requested Meeting Date: September 9, 2014

Title of Item: Committee Reports

☑ REGULAR AGENDA | **Action Requested by:** County Business

Committee	Freq.	Schedule	Current Board Representatives
Association of MN Counties (AMC) Environment & Natural Resources Policy General Government Health & Human Services Indian Affairs Task Force Public Safety Committee Transportation Policy			 Commissioner Brian Napstad Commissioner Anne Marcotte HHS Director Tom Burke HHS Director Tom Burke Commissioner Laurie Westerlund Commissioner Don Niemi
Aitkin Airport Commission	Monthly	1st Thursday	Wedel
Aitkin County Water Planning Task Force	Bi-monthly	3rd Wednesday	Wedel
Aitkin Economic Development Administration	As needed		Wedel
Arrowhead Counties Association	8 or 9x yearly	1x a month	Niemi and Marcotte
Arrowhead Economic Opportunity Agency	Quarterly		Niemi
Arrowhead Regional Development Council	Monthly	3rd Thursday	Niemi
ATV Committee	As needed		Napstad and Marcotte
Big Sandy Lake Management Plan	Monthly	2nd Thursday	Napstad, Alt. Marcotte
Central MN Corrections	Monthly	3rd Wednesday	Wedel, Westerlund
Development Achievement Center	Monthly	3rd Thursday	Westerlund, Alt. Niemi
East Central Regional Library Board	Monthly	2nd Monday	Niemi
Economic Development	Monthly	1st Wednesday	Marcotte and Niemi
Emergency Management	As needed		Wedel
Environmental Assessment Worksheet	As needed		Marcotte and Napstad
Extension	4x year	Monday	Wedel and Westerlund
Facilities	As needed		Wedel and Napstad
Forest Advisory	Every other month	3rd Tues of even numbered mths	Marcotte and Napstad
H&HS Advisory (Liaison)	Monthly except July	1st Wednesday	Westerlund and Marcotte
Historical Society (Liaison)	Monthly	4th Wednesday	Wedel
HRA	Monthly	4th Monday	Westerlund
Insurance	As needed		Wedel and Westerlund
Investment	As needed		All Commissioners
Joint Powers Natural Resource Board	Monthly	Last Monday	Napstad and Land Cmr Jacobs
Labor Management	Quarterly	Varies	Wedel, Alt. Westerlund
Lakes and Pines	Monthly	3rd Monday	Niemi, Alt. Marcotte
Law Library	Quarterly	Set by Judge	Niemi
McGregor Airport Commission	Monthly	1st Wednesday	Napstad
Mille Lacs Watershed	Monthly	3rd Monday	Niemi, Westerlund
Mississippi Headwaters Board	Monthly	3rd Friday	Napstad
MN Rural Counties Caucus	8x year	Varies	Marcotte, Alt. Niemi
NE MN Office Job Training	As called		Napstad
Northeast MN ATP	2x year		Niemi and Engineer Welle
Northeast Waste Advisory Committee	Quarterly	2nd Monday	Napstad, Alt. Westerlund
Northern Counties Land Use Coordinating Board	Monthly	1st Thursday	Napstad, Alt. Marcotte
Ordinance	As needed		Napstad and Marcotte
Park Commission	Monthly	2nd Monday	Westerlund
Personnel	As needed		Marcotte and Wedel
Planning Commission	Monthly	3rd Monday	Westerlund
Purchasing/Building	As needed		All Commissioners
Snake River Watershed	Monthly	4th Monday	Niemi
Sobriety Court	Monthly	3rd Tuesday	Wedel
Solid Waste Advisory	As needed		Napstad and Westerlund
Toward Zero Deaths	Monthly	2nd Wednesday	Wedel
Tri-County Community Health Services	Quarterly & as needed	2nd Thursday	Westerlund