The following report summary was generated by Check-RAS.

TFG provided comments as shown in red.

cHECk-RAS Report

HEC-RAS Project:	*upwagontrainwshd.prj*
Plan File:	*upwagontrainwshd.p05*
Geometry File:	*upwagontrainwshd.g06*
Flow File:	*upwagontrainwshd.f02*
Report Date:	*4/23/2015*

TFG Comments:
n/a - Messages were generated erroneously by cHECk-RAS.

Message ID	Message	Cross sections affected	Comments
CV LF 01	This is ($strucname$). The selected profile is $profilename$. Type of flow is low flow because, 1. EGEL 3 of $egel3$ is less than or equal to MinTopRd of $minelweirflow$. 2. EGEL 3 of $egel3$ is less than MxLoCdU of $mxlocdu$.	110; 8247.5; 9970; 11185; 885	noted
CV LW 03	This is ($strucname$). The tolerance ratio of {(QWeir + Qculv) - QTotal}/Qtotal is more than 0.01. Please investigate the problem.	110; 8247.5; 9970; 885	n/a
CV PW 03	This is ($strucname$). The tolerance ratio of {(QWeir + Qculv) - QTotal}/Qtotal is more than 0.01. Please investigate the problem.	110; 8247.5; 9970; 885	n/a
NT RC 05	The left overbank n-value of $nlob$ and the right overbank n-value of $nrob$ are less than or equal to the channel n-value of nch. Follow the procedure in (FHWA, 1984) to compute the n-value for the natural floodplain and the channel. Or follow the procedure in (USGS, 1977) to compute the n-value for urban development. Please submit supporting information on the evaluation of n-values.	60.95923; 110(Culvert-DN); 110(Culvert-UP); 165.7338; 331.0116; 463.4073; 652.2532; 1229.297; 1756.032; 2152.504; 2456.106; 2944.474; 3412.695; 3587.119; 3823.803; 4165.757; 4652.253; 5169.352; 5574.019; 5856.208; 6025.112; 6189.892; 6379.342; 6515.697; 6723.095; 6955.593; 7191.474; 7425.348; 7652.253; 6.536017	Manning's n values were selected using HEC-RAS documentation and field investigation.
ST IF 05S2R	This is Section 2 of a hydraulic structure. The right ineffective flow station is within the opening area of the structure. The right ineffective flow station of $ineffstar$ is less than the upstream right abutment station of $abutstar$ at ($strucname$). The Right ineffective flow station should be adjusted.	9927.051(Culvert); 815.58(Culvert)	n/a
ST IF 05S3R	This is Section 3 of a hydraulic structure. The right ineffective flow station is within the opening area of the structure. The right ineffective flow station of $ineffstar$ is less than the upstream right abutment station of $abutstar$ at ($strucname$). The Right ineffective flow station should be adjusted.	10011.3(Culvert); 954.524(Culvert)	n/a

ST IF 07S1R	This is Section 1. Right Ineffective flow option was considered at this section. However, it should be a fully expanded cross section. Ineffective flow stations and elevations should be cleared from this section, unless the areas beyond the ineffective flow stations are not within the flow path of the stream. This message should be ignored if this section is Section 3 of the downstream structure.	656.911(Culvert)	Ineffective flow denotes area outside of flow path.
ST IF 10S2L	This is Section 2 of a ($Structure$). More than one set of Left Ineffective Flow Stations were considered. There is only one structure at this location. Multiple Block Ineffective Flow option should not be used unless the area blocked by the ineffective flow stations can be considered non conveyance. cHECk-RAS will only check the ineffective flow elevations adjacent to the structure opening.	9927.051(Culvert); 815.58(Culvert)	n/a
ST IF 10S3L	This is Section 3 of a ($Structure$). More than one set of Left Ineffective Flow Stations were considered. There is only one structure at this location. Multiple Block Ineffective Flow option should not be used unless the area blocked by the ineffective flow stations can be considered non conveyance. The cHECk-RAS will only check the ineffective flow elevations adjacent to the structure opening.	10011.3(Culvert); 954.524(Culvert)	n/a
XS CD 01	Critical Depth occurs at $assignedname$ flood. Flow Code will be "C". The Ineffective flow option is used. The Ineffective Flow elevation is equal to or higher than the Critical WSEL. Please investigate whether this selection is appropriate.	6.536017; 60.95923; 165.7338; 463.4073; 4165.757; 4652.253; 5169.352; 5574.019; 5856.208; 6025.112; 6189.892; 6379.342; 6515.697; 6723.095; 6955.593; 7191.474; 7425.348; 7652.253; 7930.276; 8204.896; 8289.192; 8469.36; 8623.567; 8781.211; 8995.375; 9170.961; 9367.647; 9475.45; 9600.564; 9710.718; 9927.051; 10011.3; 10492.59; 10645.43; 368.0944; 451.5626; 573.3611; 656.911; 815.58; 954.524; 1479.797; 1613.93; 1860.394; 1963.124; 2094.507	Ineffective flow denotes area outside of flow path.
XS DC 01	Discharge decreases in the downstream direction for $assignedname$ flood. There are no lateral structures. Documentation of hydrologic analysis is required or provide explanation.	11794.2	n/a

XS DC 04L	There is no flow on the right overbank at the downstream cross section $presecno$ for the 1%-annual-chance flood. There is no flow on the left overbank at this Section $secno$. Consider placing a cross section in between these sections. The HEC-RAS geometry file may need to be recreated using a GIS program.	652.2532; 1229.297; 1756.032; 2152.504; 2456.106; 2944.474; 3412.695; 3587.119; 3823.803; 4165.757; 4652.253; 5169.352; 5574.019; 5856.208; 6025.112; 6189.892; 6379.342; 6515.697; 6723.095; 6955.593; 7191.474; 7425.348; 7652.253; 8781.211; 8995.375; 9170.961; 9367.647; 9475.45; 9600.564; 10492.59; 10645.43; 10808.13; 451.5626; 573.3611; 1274.974; 1479.797; 1613.93; 1728.132; 1860.394; 1963.124; 2094.507; 2280.803; 2434.013; 2559.384; 2692.75; 2844.841; 3027.437; 3199.295; 3349.702	Meandering channel dictated cross section placement.
XS DC 04R	There is no flow on the left overbank at the downstream cross section $presecno$. There is no flow on the right overbank at this Section $secno$ for the 1%-annual-chance flood. Consider placing a cross section in between these sections. The HEC-RAS geometry file may need to be recreated using a GIS program.	652.2532; 1229.297; 1756.032; 2152.504; 2456.106; 2944.474; 3412.695; 3587.119; 3823.803; 4165.757; 4652.253; 5169.352; 5574.019; 5856.208; 6025.112; 6189.892; 6379.342; 6515.697; 6723.095; 6955.593; 7191.474; 7425.348; 7652.253; 8781.211; 8995.375; 9170.961; 9367.647; 9475.45; 9600.564; 10492.59; 10645.43; 10808.13; 451.5626; 573.3611; 1274.974; 1479.797; 1613.93; 1728.132; 1860.394; 1963.124; 2094.507; 2280.803; 2434.013; 2559.384; 2692.75; 2844.841; 3027.437; 3199.295; 3349.702	Meandering channel dictated cross section placement.
XS DF 01L	Divided flow. Flow code will be DL. The $assignedname$ flood discharge has a divided flow. The starting and ending stations of the cross section should not extend beyond the watershed boundary of the studied stream. Please review the extent of the cross section. If the cross section extends beyond the watershed boundary then the cross sections need to be trimmed and the HEC-RAS geometry file may need to be recreated using a GIS program. Or use the ineffective flow option, if it has not been considered, to limit the extent of the cross section or to block the divided flow area if it is a local depression.	14152.3	Minor depression in overbank, flow assumed negligible.
XS DF 01R	Divided flow. Flow code will be DR. The $assignedname$ flood discharge has a divided flow. The starting and ending stations of the cross section should not extend beyond the watershed boundary of the studied stream. Please review the extent of the cross section. If the cross section extends beyond the watershed boundary then the cross section needs to be trimmed and the HEC-RAS geometry file may need to be recreated using a GIS program. Or use the ineffective flow option, if it has not been considered, to limit the extent of the cross section or to block the divided flow area if it is a local depression.	11126.69; 11615.72; 11794.2; 12138.61; 12231.89; 12344.52; 13000.23; 13300.41; 13434.54; 13641.05; 13878.63	n/a

XS IF 02L	Flow code will be MIL. Multiple (block) Ineffective Stations are selected for the left overbank at this River Station. This is not Section 2 or Section 3 of Multiple Openings or Multiple Culverts. Please explain why the multiple blocks ineffective flow option was used. Consider using the normal ineffective flow option.	11126.69; 11615.72; 12138.61; 12344.52; 13000.23	n/a
XS IF 02R	Flow code will be MIR. Multiple (block) Ineffective Stations are selected for the right overbank at this River Station. This is not Section 2 or Section 3 of Multiple Openings or Multiple Culverts. Please justify why the Multiple Blocks Ineffective Flow option was used. Consider using the normal Ineffective Flow option.	6.536017; 60.95923; 165.7338; 463.4073; 4165.757; 4652.253; 5169.352; 5574.019; 5856.208; 6025.112; 6189.892; 6379.342; 6515.697; 6723.095; 6955.593; 7191.474; 7425.348; 7652.253; 7930.276; 8204.896; 8289.192; 8469.36; 8623.567; 8781.211; 8995.375; 9170.961; 9367.647; 9475.45; 9600.564; 9927.051; 10011.3; 10492.59; 10645.43; 11242.79; 368.0944; 451.5626; 573.3611; 656.911; 815.58; 954.524; 1479.797; 1613.93; 1860.394; 1963.124; 2094.507	n/a
XS IF 03L	The Left Ineffective Flow Station is within the channel. The Left Ineffective Flow Station of $ineffstal$ is greater than the LeftBankSta of $bankstal$. The Left Ineffective Flow Station or the LeftBankSta should be adjusted.	11615.72; 12138.61; 12344.52; 13000.23	n/a
XS IF 03R	The Right Ineffective Flow Station is within the channel. The Right Ineffective Flow Station of $ineffstar$ is less than the RightBankSta of $bankstar$. The Right Ineffective Flow Station or the RightBankSta should be adjusted.	463.4073; 4165.757; 4652.253; 5169.352; 5574.019; 5856.208; 6025.112; 6189.892; 6515.697; 6723.095; 6955.593; 7191.474; 7425.348; 7652.253; 8623.567; 8781.211; 8995.375; 9170.961; 9367.647; 9600.564; 10492.59; 10645.43; 368.0944; 451.5626; 573.3611; 1479.797; 1613.93; 1860.394; 1963.124; 2094.507	n/a

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