
To:	Lindel R. "Lindy" Jackson President – Board of Directors Hunter's Run Conservancy District	From:	John Menninger, PE Stantec Consulting Services Inc. Cincinnati, Ohio
File:	173410727	Date:	March 29, 2024

Reference: Hunter's Run Conservancy District – Assessment Methodology

BACKGROUND

The Hunter's Run Conservancy District (HRCD, District) has a boundary covering approximately 49 square miles in Fairfield County, Ohio. The original District Boundary is described in the Articles of Incorporation filed with the secretary of state on March 27, 1952. The District includes the Hunter's Run Watershed and the Upper Hocking River Watershed and adopted in the 1954 amended work plan. As part of the revised work plan, an additional benefitting area was added to the west of Memorial Drive and South Broad Street, bounded on the south by Spring Street and to the west adjoining the Hunter's Run Watershed boundary.

The HRCD was established to act as the local sponsor to implement the Work Plan prepared by the US Department of Agriculture – Soil Conservation Service (SCS). The amended Work Plan proposed construction of eight flood control structures and twenty-two sedimentation control structures within the District boundary to reduce and detain potential flood waters, reduce soil erosion and sediment transport, and improve local economic conditions.

The current HRCD system includes twenty-eight dams constructed by the SCS (Now USDA- Natural Resources Conservation Service (NRCS)) between 1954 and 1960. Each of these structures are operated and maintained by the HRCD. These structures provide benefit to property owners in the watershed and to residents of Fairfield County. The primary benefit is the reduction in peak flow from the upper areas of the Hunter's Run and Upper Hocking River Watershed which in turn, reduces the risk of flooding to downstream property and infrastructure.

The HRCD is seeking to readjust their appraisal of benefits per the Ohio Revised Code (ORC) Section 6101.54 for a maintenance assessment under ORC 6101.53. Stantec Consulting Services Inc. (Stantec) is providing engineering consulting services to HRCD to support this readjustment and the development of an assessment record.

As part of the reappraisal of benefits and assessment process, the HRCD boundary was adjusted to better reflect modern terrain data. The details of the HRCD boundary used in the assessment process are described in Attachment 1.

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ASSESSMENT METHODOLOGY

Stantec developed a draft database for the assessment of properties within the District based on the Reassessment of Benefits and Capital budgeting process completed in 2023 by Jack Faucett Associates, Inc. (JFA) and Stantec. The following memorandum describes the methodology for determining the Geographic Information System (GIS)-based assessment.

The analysis started with the Fairfield County Auditor's Computer Assisted Mass Appraisal (CAMA) database (provided by the County on September 7, 2023) and Parcel Data (provided by the County on September 12, 2023). Certain updates were made by the County to the parcel dataset subsequent to the initial analysis. These updates included parcel splits and consolidations that occurred after September 12, 2023. The revisions to these parcels were based on data provided by the County on March 18, 2024.

The parcel data was intersected with the updated HRCD boundary. The total parcel count within the District boundary is 13,598. A list of these parcels is included as Attachment 2. State of Ohio parcels are unable to be assessed. A total of 100 State of Ohio parcels were removed from the working database, determined by Owner Name. The total parcel count following the removal of the State of Ohio parcels is 13,498. The parcel count was further reduced by 76 for those that did not include a parcel ID number for a total of 13,422. These 76 parcels appeared to primarily be related to public Right of Way (ROW). Of these 13,422 parcels, there are 13,387 unique parcel PINs. The duplication of parcel PINs is due to some parcel polygons being split by roads or by other means.

In the Readjustment of Appraisal of Benefits – Final Report (JFA/Stantec, 2023), the benefits / damages avoided associated with HRCD infrastructure were calculated based on two scenarios:

- A) Current Conditions (As-built and Maintained) – Assumes the existing HRCD system's nine (9) major flood control structures (Dams No. 1, No. 2, No. 3, No. 4, No. 5, No. 6, No. 8, No. 9, and R-63) are maintained at their current efficiency level including new required capital.
- B) Pre-Project - This scenario simulates the potential flood events that would occur if the HRCD system of nine (9) major flood control structures were not in place.

The conclusion of the Appraisal of Benefits Final Report is that the HRCD flood control system is economically justified and provides approximately \$1,639,000 of net present value annual benefit for the region. Of that total, approximately \$706,000 is associated with direct benefits, while \$934,000 is related to indirect benefits realized by the broader region including all property within the District.

Per direction from the HRCD, the assessment methodology has been developed based on assigning a proportional value to Direct beneficiaries (those within the Pre-Project 0.2% Annual Chance Exceedance (500-year, 1:500 year) "Pre-Project" floodplain limits), and a Base Assessment for Indirect beneficiaries (all parcels within the District boundary). The Direct/Indirect Assessment rates were initially calculated using the 2024 HRCD Budget of \$800,056 as a starting point (as shown in the Readjustment of Appraisal of Benefits – Final Report (JFA/Stantec, 2023)). This budget amount was based on the projected 2024 annual operating and maintenance budget of \$550,056 with an additional \$250,000 set aside for future dam maintenance. More detail on the development of the operating and maintenance budget is described in the Appraisal of Benefits Final Report (JFA/Stantec, 2023).

The budgeted \$800,056 was proportionally assigned to properties with a total of \$344,471 allocated to Direct beneficiaries, and \$455,585 assigned to Indirect beneficiaries based on the Readjustment of Appraisal of

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Benefits – Final Report (JFA/Stantec, 2023). Table 1 provides a breakdown of the total parcel PINs and landuse class associated with the properties assigned for Direct and Indirect benefits.

Table 1 – Total Parcels PINs and Starting Assessment Values Based on Benefits and Landuse Class

	Direct Benefits	Indirect Benefits	Total Benefits
Landuse Class	Parcel Count	Full Parcel Count	
Residential (R)	1,374	10,930	
Industrial (I) & Commercial (C)	338	1,466	
Exempt (E)	102	405	
Agricultural (A)	50	586	
Total Parcels	1,864	13,387	
Total \$	\$344,471	\$455,585	\$800,056

DIRECT BENEFITS

For the Direct Assessment, 1,864 parcels were identified within the Hunter's Run and Upper Hocking River as intersecting the 1:500 year, "Pre-Project" floodplain limits.

The Auditor's Appraised Building Value for these 1,864 parcels was summed up for each Landuse Class; Residential (R), Industrial & Commercial (I & C); and Exempt (E). The benefits determination (JFA/Stantec, 2023) did not identify any direct benefits to Agricultural (A) or Unknown (typically Right of Way) properties; and therefore, no direct assessment was calculated for these properties as direct benefits were primarily calculated based on structural, content, and vehicular damages and business loss, cleanup, and emergency preparations.

A portion of the total Direct Benefit amount (\$344,471) was initially assigned to each parcel based on the parcel's landuse class and extent of determined benefit. First, the total Direct Benefit budget of \$344,471 was proportionally divided by the sum of all building values for each landuse class. The output was an assessment rate for each class. This assessment rate was then multiplied by the individual building value within each landuse class and an assessment value was calculated for each parcel. Table 2 summarizes the assessment rate and total initial direct benefit assessment amount per landuse class.

Table 2 – Starting Direct Benefit Values Based on Landuse Class

Landuse Class	Parcel Count	Assessment Rate	Proportional Benefits Based upon Class
R	1,374	0.0015484404	\$153,718
I & C	338	0.002399032	\$142,549
E	102	0.0010057671	\$48,204
A	50	--	--
Total Parcels	1,864	--	--
Total \$	--	--	\$344,471

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Following the calculation of the assessment rate, the District requested Stantec review the spatial location of Building Footprints (Fairfield 2015) associated with parcels identified as Direct beneficiaries to adjust the assessments with a more detailed consideration of direct flood impact. Stantec performed a spatial analysis, reviewing the building location for parcels partially impacted by the 1:500 year, "Pre-Project" floodplain limits. The following criteria were used to re-evaluate the Direct Assessment based on landuse class and extent of impact.

- R – Direct Assessment Reduced to \$0.
 - The residential parcel had no appraised building value; or
 - The building footprint (occupied structure) was outside the 1:500 year, "Pre-Project" floodplain limits.
- I, C, E – Direct Assessment Reduced to \$0.
 - The non-residential parcel had no appraised building value; or
 - The building footprint was outside the 1:500 year, "Pre-Project" floodplain limits and the inundation area on the parcel was less than 20% of the total parcel area.
- I, C, E – Direct Assessment Reduced by 34% of the full Direct Assessment amount for that parcel.
 - The non-residential building footprint was outside the 1:500 year, "Pre-Project" floodplain limits and the inundation area on the parcel was greater than or equal to 20% of the total parcel area. (While there may be no impact shown for the building footprint, this reduction does consider impacts to property access, utilities, flood damage cleanup, etc.).
- R, I, C, E – Full Amount of the Calculated Direct Assessment
 - The primary building footprint was within the 1:500 year, "Pre-Project" floodplain limits.

Following the rules listed above, the starting Direct Assessment value was reduced from \$344,471 to \$251,993. On February 11, 2024, the Board of Appraisers reviewed the parcel dataset and proposed methodology. The Board of Appraisers recommended an exception to the proposed methodology for select parcels that had more than 20% of the parcel area impacted by the 1:500 year, "Pre-Project" floodplain limits, but a "usable space" that was less than 20% impacted. It was requested that the Direct Assessment of the two identified parcels be reduced to \$0.

Following the spatial analysis updates, Stantec revised the Direct Assessment rates based on the remaining parcels receiving a direct assessment and the target Direct Assessment of \$251,993.

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Table 3 – Revised Direct Assessment Rates Based on Landuse Class

Landuse Class	Parcels With Full Direct Assessment	Appraised Bldg. Val. Full	Parcels With Reduced Direct Assessment	Appraised Bldg. Val. Reduced 34%	Assessment Rate	Assessment by Class
R	1,028	83,051,180	N/A	N/A	0.001548442780	\$128,600
I & C	150	27,333,950	4	4,685,399	0.002747432463	\$87,971
E	21	12,996,780	9	32,596,410	0.001026414910	\$35,422
TOTAL	1,199		13			\$251,993

Table 4 provides a statistical summary of the direct assessment values. Figure 1 shows the distribution of Direct Assessment values across the Direct benefitting area.

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Table 4 – Summary of Direct Assessment Values per Landuse Class

Class*	Parcel PINs Within 1:500 Pre-Project Floodplain	Parcel PINs with No Building Value	Parcel PINs Minimally Impacted (\$0)	Parcel PINs with Reduced Direct Assess.	Parcel PINs with Full Direct Assess.	Final Direct Assessment			
						Sum	Mean	Median	Maximum
R	1,374	212	134	N/A	1,028	\$128,600	\$125	\$126	\$330
I	10	6	0	1	3	\$2,645	\$661	\$400	\$1,637
C	328	143	35	3	147	\$85,326	\$569	\$210	\$18,372
E	102	65	7	9	21	\$35,422	\$1,181	\$71	\$14,684
Total	*1,814	426	176	13	1,199	\$251,993			

* Unknown and Agricultural classes are not included in Direct Assessment.

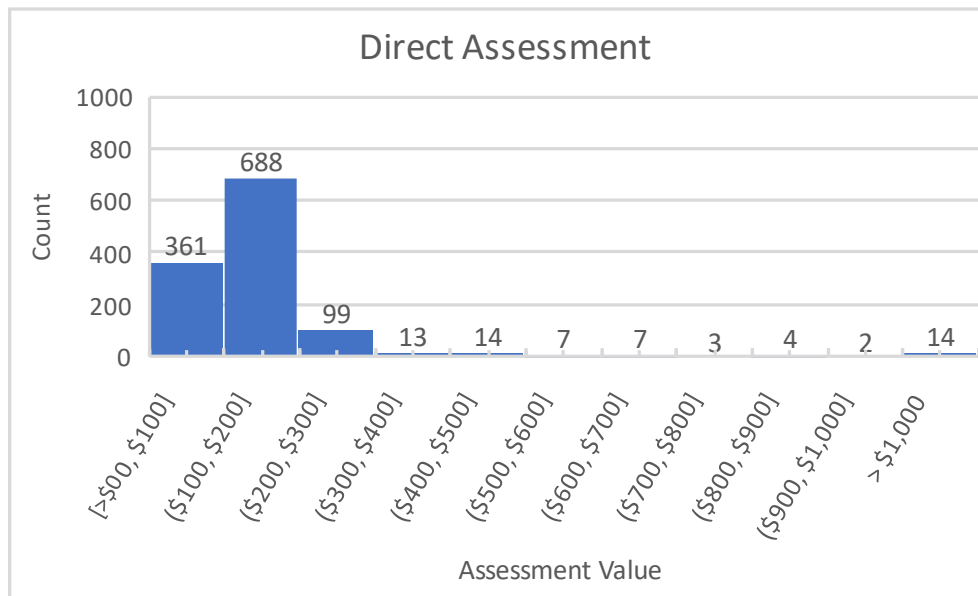


Figure 1 – Distribution of Direct Assessment Value (By Number of Parcels)

Reference: Hunter's Run Conservancy District – Assessment Methodology

INDIRECT BENEFITS

The Indirect Benefits assessment calculation was generated using the Auditor's Appraised Building Value on the 13,387 parcel PINs fully or partially within the HRCD boundary. The calculation started with a Base Assessment on each parcel within the District.

- A \$2 Base Assessment was applied to all undeveloped/vacant property or on parcels with a Building Value between \$0 and \$10,000. This process accounts for limited development on parcels with standalone outbuildings and/or parking lots identified within the building value.
- Any parcel with a Building Value greater than \$10,000 was assessed a rounded value of \$41 based upon the proportional benefits shown in Table 5.

Table 5 – Summary of Indirect Assessment Values per Landuse Class

Landuse Class	Full Parcel PIN Count	Parcel PINs with \$2 Assessment	Parcel PINs with \$41 Assessment
R	10,930	1,232	9,698
I & C	1,466	648	818
E	405	238	167
A	586	306	280
Total Parcels	13,387	2,424	10,963
Total \$	--	\$4,848	\$449,483
Total Indirect Assessment = \$454,331			

SUMMARY

Table 6 shows a statistical summary of total assessment values including Direct and Indirect Assessments based on each landuse classification. Stantec set up an AGO Map Viewer for HRCD and their Board of Appraisers to review each of the District's parcels on an individual basis. The calculated assessment values are identified as the "Final" assessments within the AGO Map Viewer. Stantec also provided HRCD an Excel spreadsheet containing the individual assessment value calculated for each parcel within the HRCD boundary.

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Table 6 – Summary of Final Assessment Values per Landuse Class

Class	Frequency	Sum	Mean	Median	Minimum	Maximum
R	10,930	\$528,682.00	\$48.37	\$41.00	\$2.00	\$371.24
I	129	\$4,502.15	\$34.90	\$2.00	\$2.00	\$1,678.03
C	1,337	\$118,302.85	\$88.48	\$41.00	\$2.00	\$18,413.47
E	405	\$42,745.00	\$105.54	\$2.00	\$2.00	\$14,725.14
A	586	\$12,092.00	\$20.63	\$2.00	\$2.00	\$41.00
Total	13,387	\$706,324				

ADJUSTMENT TO DISTRICT BUDGET

As shown in Table 6, the final proposed annual assessment value is \$706,324. This total is less than the \$800,056 budget initially projected by the HRCD as described in Readjustment of Appraisal of Benefits – Final Report (JFA/Stantec, 2023). Due to delays in advancing the proposed capital projects discussed in Table 3 of the Readjustment of Appraisal of Benefits – Budget Memo (Stantec, 2023), the HRCD plans to annually set aside approximately \$156,268 for future capital expenditures and dam rehabilitation projects needed over the next 20 years (rather than the initial \$250,000 projection).

A Benefit-Cost Ratio (BCR) greater than one (1.0) indicates the net present value of benefits derived from the HRCD system would exceed the estimated net present value of costs, and that the proposed investment is anticipated to provide positive value to the community. Since the benefits associated with the HRCD flood control system would not change with a revision to the budget, the BCR for the system would only increase with a reduction in operating and maintenance expenses, therefore, no updates to the Readjustment of Appraisal of Benefits – Final Report (JFA/Stantec, 2023) is planned at this time.

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Attachments: Attachment 1 - HRCD Boundary Memo
 Attachment 2 - Att2_Parcels_In_HRCD_03282024.pdf

c. Jonathan Ferbrache – Fairfield SWCD; Adam Pooler – Stantec

Web Map Viewer Link: [Hunters Run Conservancy District Assessment Viewer](#)