

KIA MHI Determination Methods Summary

	Default Weighted Proximity Analysis (DWPA)	Modified Weighted Proximity Analysis (MWPA)	MHI Income Survey (IS)
Definition	A weighted MHI value in the WRIS Portal that is automatically calculated using: 1) the estimated households served derived from proposed and existing water/sewer lines and 2010 census block population data; and 2) census tract MHI values from the 5-year American Community Survey (ACS).	A manual spatial analysis conducted by the applicant that calculates a weighted MHI value using: 1) customer location data (meter locations, structure points, addresses, etc.); and 2) census tract MHI values from the 5-year ACS.	A manual collection and documentation of data completed by the applicant to determine the MHI Threshold (or range). The applicant may complete a sample survey with a randomized selection of households or a census survey that includes the entire project or system service area.
When to Use It	<p>There is a low to medium census tract MHI margin of error for the project or system service area.</p> <p>The area is homogeneous (i.e. the household income in the project area is not highly variable and is consistent with census tracts).</p> <p>There are water and sewer lines mapped for the project, the project will impact the entire system service area, or the MHI for the entire system is representative of the project area.</p>	<p>There is a low to medium census tract MHI margin of error for the project or system service area.</p> <p>The area is homogeneous (i.e. the household income in the project area is not highly variable and is consistent with census tracts).</p> <p>The project or system service areas cover multiple census tracts, including census tracts that have the targeted MHI.</p> <p>There has been a population shift in the project or system service area.</p> <p>There are no water or sewer lines mapped for the project but there is a defined service area (i.e. water tank service area).</p> <p>There are distribution or collection lines in census tracts that do not receive residential services from the utility.</p> <p>The project area covers multiple census tracts with significantly different MHI values.</p>	<p>There is a high census tract MHI margin of error for the project or system service area.</p> <p>The area is <u>not</u> homogeneous (i.e. the household income in the project area is highly variable and inconsistent with census tracts).</p> <p>The project or system service area is small or completely contained within a single census tract.</p> <p>There has been a dramatic population and/or economic shift in the project or system service area.</p>
<div style="border: 2px solid orange; padding: 10px;"> <p>MHI DETERMINATION EXPIRATION</p> <p>The DWPA and MWPA must be completed using the MHI Thresholds established for the funding year's cycle (e.g. if a project is funded in FY2020, then the FY2020 MHI Thresholds must be used for analysis).</p> <p>The IS will be accepted for the consecutive funding cycle if for some reason the project is not funded in the original funding cycle (e.g. the IS will be accepted in FY2021 if it was completed using FY2020 MHI Thresholds for the previous funding cycle).</p> </div>			
<hr/> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>PROJECT SAMPLE SURVEY</p> <p>Sample surveys are used when there is a large number of households in the project area and a project census survey is not feasible.</p> </div> <div style="width: 45%;"> <p>PROJECT CENSUS SURVEY</p> <p>Census surveys are used when there is a small number of households or specific areas need to be targeted to achieve the MHI threshold.</p> </div> </div>			

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Process

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<ol style="list-style-type: none"> 1. Complete a WRIS Project Profile with appropriate mapping. 2. The MHI value in the WRIS Project Profile will automatically be used for the project unless the applicant contacts KIA for alternative considerations. 	<ol style="list-style-type: none"> 1. Review MHI values in WRIS Project Profile and contact KIA if there is a concern with the DWPA MHI (contact KIA during the call for projects or prior to release of the IUP). 2. After consultation, KIA will advise to proceed with MWPA method if it is applicable to the project. 3. Data collection: <ul style="list-style-type: none"> - Project Service Area; - Household Location Shapefile; - 5-Year ACS MHI Census Tract Shapefile. <p>All shapefiles should be projected in the Kentucky State Plane Single Zone for analysis. Contact KIA for assistance in selecting and downloading census tract data.</p> 4. Complete a proximity analysis in GIS software to determine the number of households in each census tract. 5. List the total number of residential customers in each census tract. 6. Calculate the weighted MHI in KIA MWPA Report Form. 7. Submit documents to KIA for review and approval. 	<ol style="list-style-type: none"> 1. Review MHI values in WRIS Project Profile and contact KIA if there is a concern with the DWPA MHI (contact KIA during the call for projects or prior to release of the IUP). 2. After consultation, KIA will advise to proceed with IS method if it is applicable to the project. 3. Select the type of survey. 4. Develop the Questionnaire or use KIA Survey Form. 5. Define the project service area and the survey scope (Sample vs. Census). <p>Sample: a) Identify project households; b) Determine sample size; c) Randomly select sample; and d) Respondent replacement procedures.</p> <p>Census: a) Identify project households; and b) Identify priority survey areas.</p> 6. Conduct the survey. 7. Record and determine results in KIA IS Report Form. 8. Submit documents for KIA review and approval. <p>If applicant is conducting an income survey for another funding source, KIA may accept alternative IS methodologies. Contact KIA for consultation and approval.</p>

When selecting and using alternative methods, the following levels of progression must be maintained: 1) DWPA; 2) MWPA; 3) IS Sample; and 4) IS Census. The applicant cannot decide to use the results from DWPA after an IS has been submitted.



