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| OTRFA Benefit Charge Data Evaluation |
| A Report by: Larry Rabel, Deployment Dynamics Group LLC, |
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| The following report reviews the methodology used in this evaluation, its findings, and recommendations to be considered prior to and post implementation of the proposed database evaluated in this report for the Olympia-Tumwater Regional Fire Authority Planning Committee.  |
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# Data Source

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Source data used in the OTRFA Benefit Charge database come from the Thurston County Assessor.

The Assessor’s data includes additional information related to specific structures and properties that could be utilized in the future by an implemented OTRFA for pre-fire planning and risk assessment.

# PROJECT:

The project asked for the review of the Olympia Tumwater Regional Fire Authority (OTRFA) Planning Committee’s proposed Fire Benefit Charge (FBC) database. A review of the database’s calculations and data was completed.

A relational database for the project was provided to Deployment Dynamics Group (DDG) by Interface Systems, contractor for the OTRFA Planning Committee. Additional data used in the project was downloaded from, and/or reviewed through the Thurston County Assessor’s website.

# METHODOLGY:

Random fields of the data were visually inspected and specific reviews of 75 of 23,196 land parcels within the database were evaluated. Proposed benefit charge amounts calculated for these parcels were validated using the formula’s factors established in Figure 1. The formula used in this project was:

**18 X (√ square feet) X (cost per gallon) X (balancing factor) X (applicable discount) = Benefit Charge**

Figure OTRFA Fire Benefit Charge Factor Page



Database square footage, tax exemptions and property classifications were validated using Thurston County Assessors website and its “Direct Parcel Number Lookup” page. Additionally database files from the “Thurston GeoData Center – Open Data Site” were downloaded for the evaluation. Two main data files were and used: “Assessor’s Property Table” and “Assessors Property Table Extended”. Land parcel numbers were used as data keys to compare data between the OTRFA system data and Thurston County data.

# SYSTEM FUNCTIONALITY:

All calculations of the charges assessed in the OTRFA Planning Committee’s database were found to be correct using the square footage, classifications, and exemption data within the database provided for evaluation by Interface Systems.

# DATA EVALUATED:

From the sample parcels reviewed and visual evaluation of OTRFA’s “Parcel\_RPAcct” table, the following findings were noted;

## Residential Square Footage Data:

Residential square footage within the OTRFA database includes all “primary” structure square footage. This includes all floors of the dwelling(s) on the land parcel, attics, basements, enclosed porches, open porches, garages, carports, attached storage structures, and balconies. This data is found in Thurston County’s “residence” data table.

Missing data was noted when comparing residential Parcel numbers 74810000302 and 54950001000 to Thurston County’s source data. Both have detached structures with square footage that is not included in the OTRFA database. It is unclear if this is an intentional omission directed by the Planning Committee. Parcel 54950001000 has an 848 square foot garage listed and parcel 74810000302 has a 748 square foot pole barn in Thurston County Data that is not included in the OTRFA database.

## Commercial Square Footage Data:

Commercial square footage is missing from land parcels in this category where more than one building is on the land parcel. Thurston County identifies each building on a land parcel with a separate building identification number. This building ID becomes a child of the master land parcel number. In Thurston County’s “Extended Parcel File” this “parent to child” data relationship the land parcel number is repeated as many times as there is a separate building and, each building is given a unique identifier for that parcel. It appears that the OTRFA database contains square footage for only the first building listed for the parcel number. It was discovered that the square footage of buildings/structures on land parcels having more than one structure is missing from the assessment of fire benefit charges. The sample validation of 42 specific commercial properties in the attached spreadsheet was listed as having a total of 1,553,021 square feet. Thurston County data shows these same parcels to have a total of 4,454,966 square feet when all associated building square footage is added.

## Apartment Square Footage Data:

Thurston County’s apartment data uses the same “parent to child” data relationship and a large amount of square footage is missing for this property classification as well. Using the “Black Lake Apartments” as an example, the OTRFA database assesses only 15,924 square feet for the complex when the total structure square footage in Thurston County’s data is 283,317.

## Tax Area Identifier Data:

Areas having all of the same taxing districts are assigned a unique Tax Area identifier by the Assessor. The OTRFA database contains land parcel information for Olympia tax code areas 110, 114 and 126 and Tumwater tax code areas 440 and 442. This evaluation found six additional tax code areas that appear to identify city annexation of areas belonging to fire district’s 5, 6, 9 and 11. To continue assessment of voter approved bond debt issued prior to annexation by a city, it appears Thurston County created additional levy code areas for each individual annexation. In total there are six additional levy code areas that should be reviewed and validated by each city and added to the OTRFA database. The levy code areas to be validated as belonging to Olympia are 118, 119 and 130. These three tax areas include an additional 233 land parcels. Levy code areas that appear to be within Tumwater are 444, 445 and 447. These three tax areas contain an additional 1,158 land parcels.

## Sprinkler Data:

Thurston County appears to have errors in the data field designating fire sprinkler coverage for commercial buildings. OTRFA database accurately reflects Thurston County data which includes sprinkler coverage inputs ranging from 9 to 100 percent. This appears to be a data entry error by Thurston County.

Because NFPA 13 automatic fire sprinklers are expensive to install, add value to commercial structures county assessors usually maintain good records for the presence of these systems. It was noted that at least 5 commercial classified land parcels have structures without sprinkler systems listed. Apartments utilize NFPA 13-R sprinkler systems which are fairly inexpensive and county assessors typically do not accurately maintain good data on these. The OTRFA database has 260 apartment classified parcels that show no sprinkler systems are present. Data for automatic fire sprinklers should be validated by OTRFA staff prior to implementation.

## Exempt Property Data:

Several exempt properties were identified as having benefit charges assessed. It appears that all City of Olympia and Tumwater properties have been assessed. Included in these properties are all fire stations that will become part of the fire authority. At least one school owned by a religious entity (Evergreen Christion Center) was noticed in the data. The Thurston County data field denoting tax status was not identified in the OTRFA database and was not found in Thurston County during this evaluation.

In 2017, RCW 52.26.180 was amended to exempt non-profit housing from fire benefit charges. This review did not search out this type of land ownership but it is likely that they exist in the proposed OTRFA service area subject to the proposed benefit charge.

## New Construction Data:

A significant number of land parcels with structures built in 2022 were noted in County data that have not been updated into the OTRFA database. The OTRFA database should be refreshed to include the most current Thurston County data.

## Senior and Disabled Data:

Property owners qualifying for low income exemptions appear to be properly applied. However, these exemptions are only authorized for a few years and must be re-applied for when they expire. If properties are sold, the exemption expires unless the new owner applies and qualifies for a senior or disabled exemption. As a result it is important for the OTRFA data field to be updated with County data annually and as close as possible to the final setting and export of fees to Thurston County for assessment.

# SUMMARY OF KEY FINDINGS

* The OTRFA database accurately calculates benefit charges utilizing the data available for calculation.
* The OTRFA database is missing square footage of some detached structures for residential structures.
* The OTRFA database is missing significant amounts of structure square footage for commercial and apartment land uses.
* The OTRFA database appears to be missing land and structure data from tax areas within Olympia and Tumwater where the cities have annexed formally rural areas served by fire districts 5, 6, 9, and 11.
* The OTRFA data field for automatic fire sprinklers has some questionable percentages of sprinkler coverage that is reflective of Thurston County data.
* The OTRFA database may not accurately reflect the presence of automatic fire sprinklers in structures on property classified as apartment.
* The OTRFA database is currently assessing some tax exempt properties. The database does not have a designated field identifying tax exempt properties.
* The OTRFA database does not have accurate data for the Port of Olympia.

# CONSIDERATIONS AND RECOMMENDATIONS

## Data Recommendations

* The OTRFA database is missing square footage of some detached structures for residential structures.
	+ Review Thurston County data fields to identify the types of improvement/structure square footage to be utilized in the assessment. This will provide a clear list of data for the database contractor to include in the database.
		1. Current residential square footage includes space for open porches but not patios or decks. Has Thurston County defined the difference between an open porch, patio or deck? This may become an issue during the annual complaint and review process. All square footage included should be reasonably associated with the cost of protecting from fire.
		2. What types of detached structures should be included in total square footage? It is recommended that the committee review Thurston County’s structure codes to assure only those improvements intended to be charged are assessed.
* The OTRFA database is missing significant amounts of structural square footage for commercial and apartment land uses.
	+ Direct the current database contractor to review Thurston County data relationships within Thurston County’s “Extended Parcel File” download and update property records to include square footage from land parcels having multiple building identifiers on a given land parcel.
* The OTRFA database appears to be missing land and structure data from tax areas within Olympia and Tumwater where the cities have annexed formally rural areas served by fire districts 5, 6, 9, and 11.
	+ Have the City of Olympia review Thurston County tax code areas 118, 119, and 130 to confirm these land parcels should be included into the OTRFA database.
	+ Have the City of Tumwater review Thurston County tax code areas 444, 445, and 447 to confirm these land parcels should be included into the OTRFA database.
	+ Direct the database contractor to include into the database, the additional tax code areas validated by the cities of Olympia and Tumwater
* The OTRFA data field for automatic fire sprinklers has seven parcels showing questionable percentages of sprinkler coverage. This data is accurate to Thurston County data.
	+ Fire Marshall Staff should review this data and determine the correct percentage of sprinkler coverage of these parcels.
	+ Once sprinkler coverage is validated, Fire Marshall Staff should work with Thurston County to update county data so data corruption does not occur with future data downloads.
* The OTRFA database may not accurately reflect the presence of automatic fire sprinklers in structures classified as apartments.
	+ Review Olympia and Tumwater permit information and Olympia and Tumwater Fire Department data to determine which apartments have sprinkler systems installed.
* The OTRFA database is currently assessing some tax exempt properties. The database does not have a designated field identifying tax exempt properties.
	+ The OTRFA Planning Committee should determine if current City properties (including fire stations) are to be assessed a benefit charge.
		1. Specific instructions should be provided to the database contractor to identify the specific properties that will be classified as exempt in the database
	+ Request the database contractor to identify the field and or process used to define tax exemptions for tax exempt entities.
		1. Once identified, those properties classified as “tax exempt” should be reviewed to determine if they are actually exempt from the benefit charge as authorized by RCW 52.26.180 and 52.26.190.
	+ Consider assigning an RFA/Fire Department member knowledgeable in data review as liaison to the database administrator to assure annual:
		1. Review and evaluation of data for accuracy to County records.
		2. Review and evaluation of exemptions authorized by RCW 52.26.180 and 52.26.190.
		3. Assure that the database contractor completes a final data download and data update reasonably late in the year (November or December) to assure data for new construction, senior and disabled exemptions, and general tax exemptions are reasonably accurate at the time the benefit charge assessments are exported to the County. This may occur after Board adoption of the budget and benefit charge amount.
* The OTRFA database does not have accurate data for the Port of Olympia.
	+ County Assessors are no longer required to keep accurate records of tax exempt properties. As a result data for properties like the Port of Olympia are not accurate. If the OTRFA is to assess the Port of Olympia, staff should evaluate this property to accurately collect square footage data and provide this reviewed data to the database contractor for inclusion in the database. Current OTRFA database shows 230,419 square feet. This parcel may have more than 3,000,000 square feet of structures.

## Setting the Benefit Charge Amount:

The RFA Board should be aware that the first few years of the annual benefit charge, errors in data will be identified. RCW 52.26.250 allows property owners to bring forth complaints. Errors of fact such as structure size or exempt status’ will be brought forward at this time. Adjusting charges for these errors will reduce the RFA’s available budget and should be anticipated. The Planning Committee or Board should add a budget percentage to the proposed budget to account for both data errors and shortages in collections of benefit charges by Thurston County. Historically database errors are reduced over time. Tax and benefit charge collections that are in arears will eventually be paid but a percentage of delayed collections should be anticipated and planned for.

## Formula Factor Considerations

The OTRFA database uses a similar “fire flow” formula foundation used by other RFA’s and fire districts in Washington State. Review of the OTRFA Planning Committee documents and maps shows there may be some equity of service issues throughout the proposed RFA. A key indicator of levels of service is travel time and it is apparent that some areas of the proposed RFA have much longer travel times than other areas. The boundaries of Olympia and Tumwater both have areas that could benefit from additional fire stations and resources.

The OTRFA Planning Committee may want to consider adding a “Level of Service” factor that could be used in the future to geographically assess higher benefit charges to sub areas or the OTRFA that would benefit most from additional first due and full first alarm resources. Much like a local improvement district, the level of service factor could be fractionally raised in specifically identified sub area(s) from the baseline of one (1) to help fund capital and staffing needs in those sub areas needing additional resources. Once community service equity is achieved, the factor could return to the baseline of one. Anything over one in the defined area would weigh heavier in benefit charge assessment.

## Formula Adoption Considerations

Some RFA’s have adopted benefit charge formulas into the plan that voters authorize removing the RFA Board’s authority to modify it in the future. The Planning Committee should consider language that gives authority to adjust or modify the formula components and factors to the RFA board during its annual budget adoption process. This will better assist the Board in addressing funding issues in the future while still being restricted under the limitations of Chapter 52.26 RCW.

## Review Board Recommendations

Once the RFA has been approved by voters, a plan should be developed to address the requirements of RCW 52.26.250. It is likely the first year implementation of the benefit charge will see considerable confusion regarding the new assessment. Prepare a method for benefit charge payers to contact and record their complaints and a process for those complaints to be presented to the Board and processed. Processing should include communications with the database contractor to assure data errors discovered during the complaint review process are corrected in the RFA’s database. Experience has shown that it is difficult to impossible to require the county to make changes to their data. If the benefit charge database is not updated properly complaints in following years will be compounded.

# FUTURE CONSIDERATIONS

Data within Thurston County’s data and the OTRFA database includes much more information than is being utilized for benefit charges. This data can be extremely valuable for community risk assessment and pre-fire planning. The future OTRFA should consider exploring this available data and utilizing it to the highest advantage for the new RFA. OTRFA staff members working with this data for preparedness and response purposes could be utilized as the liaison for the database administrator.

# REPORT ATTACHMENTS

1. OTRFA Data Validations Workbook:
	1. This workbook contains three worksheets as follows
		1. “Validation Table” this worksheet identifies the specific parcels that were evaluated by comparing the data found in the database with the data posted on Thurston County’s webpage [Thurston County Property Inquiry SPL](https://tcproperty.co.thurston.wa.us/propsql/struct.asp?fe=PR&pn=54310008500) and the data from Thurston County GeoData Center’s Extended Parcel File.
			1. Column A is the Parcel number evaluated
			2. Column B is the square footage of structures within the OTRFA database
			3. Column C is the square footage listed by Thurston County
			4. Column D is the difference between the OTRFA database and Thurston County
			5. Column E are notations of the review
			6. Column F represents the property classification assigned in the OTRFA database
			7. Column G is the amount assessed by the OTRFA database
			8. Column H is the independent calculation performed outside of the OTRFA database and confirms the accuracy of the OTRFA database calculations
			9. Column I is a calculation of the value of square footage that was not included in the OTRFA database
			10. Column J shows the net difference between the assessment of the current OTRFA database and what it will be once all square footage data is included in the database.
		2. “Fire District Levy Areas” this worksheet identifies the six levy code areas that should be reviewed by the cities of Olympia and Tumwater for inclusion into the OTRFA database.
			1. Column A identifies the tax code area (TCA)
			2. Column B identifies the city the TCA falls into
			3. Column C identifies the fire district (FD) the TCA area was created for
			4. Column D identifies the land parcels within the TCA
			5. Column E identifies the total levy assessed to the TCA in 2022
			6. Column F consists of review notes
			7. Column G identifies the year(s) the bond debt was issued
			8. Column H identifies the current status of the bond debt
		3. “Sprinkler Coverage” this worksheet identifies the counts of commercial parcels with the same percentage of fire sprinkler coverage.
2. City Assessments Workbook:
	1. This workbook contains five worksheets.
		1. “Parcel\_RPAcct” contains a filtered export from the OTRFA database that utilized “city” as a search criteria
		2. The following worksheets contain separate parcels from the Parcel\_RPAcct worksheet. One each for Olympia, Tumwater, Intercity Transit and Lacey
3. Parcel\_RPAcct\_Apartment\_Check workbook:
	1. This workbook contains one worksheet with eight high valued apartment parcels that was exported from the OTRFA database.
		1. Column K shows the square footage posted in the OTRFA database
		2. Column L shows the square footage found in the Thurston County data
			1. **Column L adds an additional 1,689,245 square feet.**
4. Tumwater-Olympia-FBC Analysis workbook:
	1. This workbook contains the calculator built to validate the fees assessed by the OTRFA database.
		1. For accuracy, the correct square footage, appropriate factors and discounts must be input.

# CONCLUSION:

It appears that additional square footage found in Thurston County data can be added to the OTRFA database. This additional square footage is mostly found on larger commercial and apartment land parcels with multiple structures. Once this additional square footage is added and the database is recalculated, these larger commercial and apartment land parcels will see increases in their fire benefit charge assessment compared to what is currently in the OTRFA database; consequently, there will be a fee reduction for smaller commercial, apartment, and all residential fire benefit charge assessments.