

Planning for success (Part 2)

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Last month, I started the discussion with [Part 1 of this topic](#). Near the conclusion of Part 1, I hoped for some questions and what-ifs. I got 'em, and I hope this month's post will provide some insight.

But there never seems to be enough time. To do the things you want {or need} to do....

As a reminder, we set the stage with a project which included physical remeasurements and walk-arounds required to accomplish data verification of all parcels by January 1, 2019 (one year prior to the planned reappraisal effective date of January 1, 2020). One year is not a legal deadline, but for planning purposes it is appropriate and reasonable to have your data prepared to be used for model building, model application, reviews, and reconciliation during the final year. It is February 2017 when we determined reinspection was needed. We have roughly 10 months of 2017 remaining, plus all of 2018. Let's determine how many work days we have. Here is a reasonable estimate of work days in a year. You can modify it as needed for your own jurisdiction, but this should be pretty close for everyone.

Number of work days in a year	
Total (52 weeks x 5 days)	260
Holidays 11	
Average Vacation Days	10
Average sick leave days	5
Average training days	5
Adjusted number of available work days	229

How many days do we have to complete the reinspection work by January 1, 2019

10/12 of 229 is available in 2017 plus 229 days in 2018 equals 420 days available to complete this project in order to meet the current IAAO Mass Appraisal Standard (the future NCDOR standard).

Time or T = 420 days.

Next, production standards (also called production levels or rates) must be determined for the various activities involved with the project. Because offices are organized differently across North Carolina, production rates will likely vary. So when comparing office production rates between counties, it's important to compare apples to apples. County appraisers in one county may perform their own data collection and data entry. Other counties may use data collectors to measure and collect property attribute data, then use separate data entry clerks to enter data, and separate appraisers make final value determinations, sign off of them, and handle appeals. And there are combinations of these tasks, plus additional tasks for some staff. Production rates for parcel review work will also be a function of parcel density, ease of travel, travel policies, weather, skills, and extent of being motivated to produce. What do you think about that last one? What are the ways to motivate production and which ways work best? That's another discussion.

The most accurate way to predict production rates in the next 420 days is to use historical information from your office using time and production reports. Note that whatever production those reports indicate does not guarantee the staff has been fully engaged and properly employed. Full engagement, proper employment, and quality control are all considerations. In other words, if something has not been done properly in the past that you have the control to improve, then those improvements should be made and production rates should begin to indicate those improvements. If you don't have control over those needed improvements, then you should use the historical production rates as they exist. With this evaluation, management inquiries about production levels can then be addressed as either being optimal with the current resources provided to the department, or they could be improved with a policy change or additional resources that are not currently available.

For our example, we are going to consider that one staff person reviews 20 residential parcels per day on average. That includes physical inspection, data verification, and data entry. There are 60,000 residential parcels to be reviewed.

The formula used for staff requirements is:

$$S = P \div (R \times T) \text{ or}$$

$$\text{Staff Required} = \text{Parcels to be worked} \div (\text{Production Rate} \times \text{Time available})$$

Here are the calculations. Let's focus on residential parcels, but include how it would work if we added hypothetical production rates for other property types.

Property Type	Staff Required S	Parcel Count P	Production Rate Field Review R	Time Avail. T.
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Property Type	Staff Required S	Parcel Count P	Production Rate Field Review R	Time Avail. T.
Residential	7.14	60000	20	420
Multi-family	0.24	500	5	420
Commercial	1.19	3000	6	420
Vacant	0.06	1000	40	420

In order to complete the review of 60,000 residential parcels by January 1 of the year prior to the effective date of reappraisal, we need 7.14 full time staff. I have heard counties mention they have co-workers that are about .14 effective, but that's another story too. If you have 7, that's cutting it close and you might consider whether changing the time available is an option. For that, you can use this formula.

$$T = P \div (R \times S) \text{ or}$$

$$\text{Time Required} = \text{Parcels to be worked} \div (\text{Production Rate} \times \text{Staff available})$$

Here we see that with 7 staff available to complete the residential review work, we probably can still make it if we can shift our deadline by just a few days.

Property Type	Time Required T	Parcel Count P	Production Rate Field Review R	Staff Available S
Multi-family	14	500	5	7
Commercial	71	3000	6	7
Vacant	4	1000	40	7

Challenges arise when we have less than 7 staff fully devoted to this project. Again, turn it into a math exercise. For example, if we only have 5 staff available, we then need 600 days. That's not acceptable. Perhaps some of our 7 staff for the project have other duties besides being fully engaged in this project. That changes the math too. If 20% of staff time will be devoted to duties other than accomplishing an average of 20 parcels per day, we need add 20% to our 429 days needed. That adds almost 100 days to the time required. We may need to request additional staff.

According to IAAO, the investment required to make the inventory of real property data needed for a reappraisal can be 75 percent of the overall cost (*Assessment Administration*. Chicago, IL: IAAO, 2003, pg 173)

In part 1 of the blog I mentioned that an effective way to request a need was to use established production standards to present the ability to accomplish explicit duties, while utilizing statutes and / or administrative direction to support your request. Justification for a request using these methods might read like this:

In order to meet IAAO Mass Appraisal Standards prior to our next reappraisal, effective January 1, 2020, we must physically review 60,000 residential parcels. In order to allow reasonable time for appraisal staff to use this review data, it is recommended the review work be complete one year prior to the effective date. We have 5 staff available for this work. At current production rates, it is projected we will not be able to accomplish this project and therefore we will not meet IAAO Mass Appraisal Standards on the data used in the 2020 reappraisal. The IAAO Mass Appraisal Standards become the NCDOR reappraisal standards in 2018.

That sounds pretty dire. But let's backup a bit. The NCDOR is in the process of writing and adopting these standards, realizing that it will be a process for most counties to meet them. Having these standards established allows us to recognize and document to others whether the standards are being met now. Adding production rates and the time element allows a method to more objectively document whether the standards will be met at some point in the future.

A closing thought on this. A great way to work towards the IAAO and NCDOR standards is to spread the work out over a few years, and set goals for each year. If parcels have not been physically inspected and verified in compliance with the standards, then consider a goal to review a percentage of your parcels every year in order to be compliant 3 or 4 years from now. Afterwards, if you do a one-sixth review each year, every parcel will be physically visited every 6 years. Perhaps use the formulas mentioned in this post to help set a reasonable goal for this New Year. Would that be a New Year's resolution? Or an ordinance? Little bit of government humor there.