

BUREAU OF LAND MANAGEMENT

Meander Lines

With John Farnsworth

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CADASTRAL SURVEY

Meander Lines

The 1973 Manual is confusing when addressing the adjustment of meander lines. John Farnsworth will talk about how this edition clarifies that topic.

Hello, my name is John Farnsworth and I work for the Bureau of Land Management in the Oregon State office as Senior Technical Specialist and Program Coordinator. I've worked as a Cadastral Surveyor for BLM for approximately 32 years and I am a registered land surveyor in the state of Oregon.

In this session, we are going to talk about meander line adjustments. This is something that was really confusing in the 1973 Manual because they called these adjustments angle points of non-riparian meander lines. I believe they used that as a title, because they wanted to make the distinction that the meander line is not the boundary of government lot but the water boundary itself is the boundary. This is really confusing.

In this Manual we are going to call this a meander line adjustment. These adjustments are used when you need to locate the angle points of a meander water boundary. The adjustment that is used is commonly called the compass rule. The compass rule presumes that any errors or random in the effect of angular and distance errors are equal. When you do this, you have to locate the meander corners on the boundary of the section or restore the meander corners on the boundary of the section, and then you establish the mathematical relationship between those corners. You then run the meander lines between those corners to determine the error of closure. This may be a field or a computational procedure.

As you can see in this slide, the closing or residual errors are distributed proportionately along each record course. The closing or residual errors are distributed on the same plan as in balancing a survey for the computation of the areas of the lottings as represented on the plat.

In this next slide shows you that this general rule is the adjustment is to be applied to the latitude or departure of any course is resolved latitude or departure of the closing error as the length of the course is to the total length of each course. In this way, you distribute along the meander line, the error of closure.

Now this procedure is especially useful in dependent resurveys to plot a meander line of record against the true location of a shoreline and you can determine if there has been movement in the water or distortion in the survey. Now, really the only change in this Manual is that we have changed the title. It is the same adjustment procedure in the 1973 Manual and it is now just called the meander line adjustment.