

**Columbia County  
ORMAP 5 Year Business Plan  
October 2003 to December 2008**

**September 2003**

# Columbia County ORMAP 5 Year Business Plan October 2003 to December 2008

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# 1. Introduction & Purpose of Plan

## 1.1 Brief history of county digital mapping of taxlots.

Columbia County is in the early stages of developing a county-wide GIS. The process began in 2000 with the formation of the Columbia County GIS Coordinating Committee (GISCO). One of the initial tasks of the committee was to undertake a preliminary GIS needs assessment and develop an outline for a GIS Pilot Project. The purpose of the needs assessment was to identify general county-wide geographic information requirements and to test control collection and tax lot conversion processes. To test the implementation process, a six square mile GIS Pilot Project was completed in 2001. The GIS Pilot Project consisted of conversion of approximately 1000 tax lots in the urban growth area of the City of St. Helens. In 2002 the County expanded the digital coverage from the Pilot Project area to include an additional 1800 tax lots. The County now has the foundation to develop a seamless county-wide GIS. To date, 2826 taxlots and 97 maps have been digitally converted to meet ORMAP Goals 3 and 4. This represents 10.87% of the taxlots in Columbia County.

## 1.2 Brief Strategic Plan Abstract.

Columbia County's strategy for digitally re-mapping the balance of the County is phased expansion from the Pilot Project and expansion area. Using the existing Pilot Project area as the starting point, the County will digitally convert a designated portion of the County each year until 2008. This approach calls for complete control collection and digital taxlot conversion to ORMAP Goals 3 & 4 in a geographic region before digital conversion of the next contiguous area.

Seven phases have been identified to complete the digital conversion process in Columbia County. The geographic areas of the seven phases are shown on the map on page 4. To date, the County has completed Phase I and II. Each of the remaining phases have approximately the same number of tax lots. Control and digital conversion for phases III-VII is forecasted to take one year for each phase. The 2003 fall ORMAP grant under consideration by the Tech Group is Phase III. The table on page 5 identifies the number of tax lots, number of maps and percentages for each of the seven phases. The timeline on page 7 shows the cost breakdown and anticipated completion date for each phase.

The seven phases to digitally convert the Columbia County tax lot structure are as follows:

**Phase I:** Phase I is the original pilot project area that was completed in 2001 and is shown as white on the below GIS Phase map. Approximately 1,000 tax lots in the St. Helens Urban Growth Boundary were digitally converted. Completed in 2001.

**Phase II:** In February 2002 Columbia County received an ORMAP grant to expand the taxlot layer of the Pilot Project to include five additional sections of land and 1800 tax lots. This phase is shown as orange on the below GIS Phase map. The grant also included funding for control. This expansion phase was completed last year. The Phase I and II area combined contains 2826 tax lots or 10.87% of the tax lots in the County.

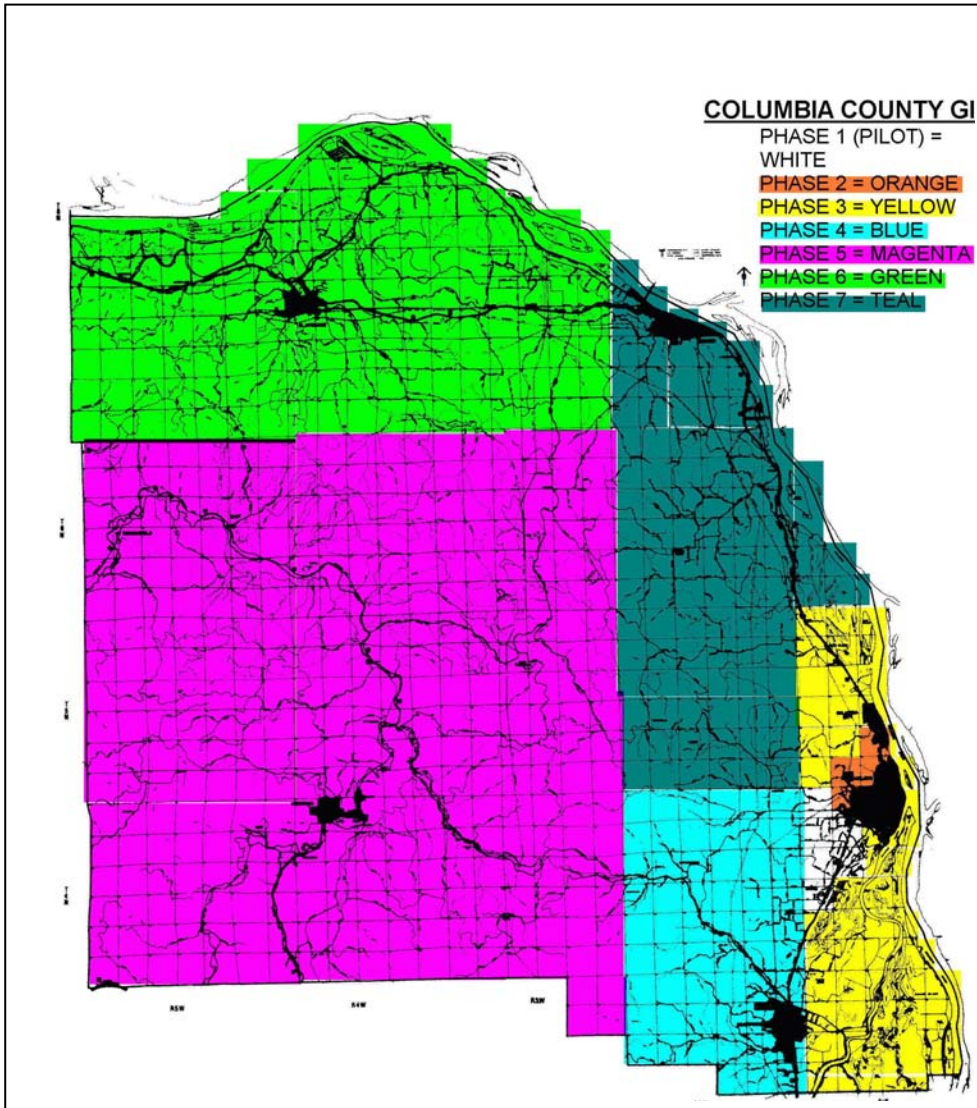
**Phase III:** This phase, shown as yellow on the below GIS Phase map, calls for expanding the County GIS from the pilot project area to the north to encompass all of the Columbia City area and south to the county border with Multnomah County. Upon completion of this phase, three townships, 5-1; 4-1 and 3-1 will be fully converted to digital form. The County submitted an ORMAP grant in the Fall of 2003 to fund this phase. ORMAP grant submitted fall of 2003. This areas contains 4897 tax lots or 18.84 % of the tax lots in the County.

**Phase IV:** Phase IV (blue on the map below) is centered around the City of Scappoose and includes all tax lots in townships 4-2 and 3-2. This areas contains 6159 tax lots or 23.70 % of the tax lots in the County. Upon completion of this phase, the most dense areas of the County will have been converted. To be completed in 2005.

**Phase V:** Phase V involves digital conversion of the City of Vernonia and the surrounding forest and farm land. It includes conversion of all of he following townships: 4-3; 4-4; 4-5; 5-3; 5-4; 5-5; 6-3; 6-4; 6-5. Phase V is shown as magenta on the map below and includes 4050 tax lots or 15.58 % of the county tax lots. To be completed in 2006.

**Phase VI:** Phase VI is shown as green on the below GIS Phase map. This phase will involve conversion in the incorporated City of Clatskanie and north to Columbia River. All of 7-3; 7-4; 7-5; 8-3; 8-4 and 8-5. To be completed in 2007. This areas contains 4168 tax lots or 16.04 % of the tax lots in the County.

**Phase VII:** The final phase will convert the northeast portion of the County. This phase is teal on the below map. There are 3888 tax lots or 14.96 % of the County's total in this area. To be completed in 2008.



Phase	T-R	# T Ls	# Maps	# TWN	# Sec	#1/4	# 1/4-1/4	# Sup	INFO
1&2	4-1	2472	79	0	5	18	52	4	AS OI 07/01/03
	5-1	354	18	0	3	7	8	0	
	<b>Totals</b>	<b>2826</b>	<b>97</b>	<b>0</b>	<b>8</b>	<b>25</b>	<b>60</b>	<b>4</b>	
		10.87%	9.51%	0.00%	1.60%	13.16%	20.69%	16.00%	
3	3-1	428	21	1	13	2	5	0	
	4-1	2845	47	1	19	1	23	3	
	5-1	1624	43	1	14	2	24	1	
	<b>Totals</b>	<b>4897</b>	<b>111</b>	<b>3</b>	<b>46</b>	<b>5</b>	<b>52</b>	<b>4</b>	
		18.84%	10.88%	18.75%	9.18%	2.63%	17.93%	16.00%	
4	3-2	4250	83	1	20	13	48	1	
	4-2	1909	92	1	34	34	22	1	
	<b>Totals</b>	<b>6159</b>	<b>175</b>	<b>2</b>	<b>54</b>	<b>47</b>	<b>70</b>	<b>2</b>	
		23.70%	17.16%	12.50%	10.78%	24.74%	24.14%	8.00%	
5	3-3	8	5	0	5	0	0	0	
	4-3	278	39	1	36	2	0	0	
	4-4	1772	45	1	17	4	21	2	
	4-5	226	11	1	10	0	0	0	
	5-3	159	36	0	36	0	0	0	
	5-4	429	26	1	17	3	5	0	
	5-5	196	10	1	6	0	3	0	
	6-3	411	36	0	36	0	0	0	
	6-4	187	9	1	6	2	0	0	
	6-5	384	25	1	19	1	4	0	
	<b>Totals</b>	<b>4050</b>	<b>242</b>	<b>7</b>	<b>188</b>	<b>12</b>	<b>33</b>	<b>2</b>	
		15.58%	23.73%	43.75%	37.52%	6.32%	11.38%	8.00%	
6	7-3	1289	67	0	34	27	4	1	
	7-4	1722	76	1	33	15	29	1	
	7-5	356	17	1	13	1	1	1	
	8-3	231	19	1	9	9	1	0	
	8-4	481	35	1	17	10	2	5	
	8-5	89	7	0	6	1	0	0	
	<b>Totals</b>	<b>4168</b>	<b>221</b>	<b>4</b>	<b>112</b>	<b>63</b>	<b>37</b>	<b>8</b>	
		16.04%	21.67%	25.00%	22.36%	33.16%	16.04%	32.00%	
7	5-2	826	44	0	36	6	2	0	
	6-1	17	6	0	5	0	0	1	
	6-2	1098	57	0	33	16	7	1	
	7-2	1947	67	0	19	16	29	3	
	<b>Totals</b>	<b>3888</b>	<b>174</b>	<b>0</b>	<b>93</b>	<b>38</b>	<b>38</b>	<b>5</b>	
		14.96%	17.06%	0.00%	18.56%	20.00%	13.10%	20.00%	
<b>TOTALS:</b>		<b>25988</b>	<b>1020</b>	<b>16</b>	<b>501</b>	<b>190</b>	<b>290</b>	<b>25</b>	

### **1.3 What ORMAP goal(s) does the county currently meet?**

Columbia County currently meets ORMAP Goals 3 & 4 for 10.87 % of the tax lots in the County. The Goal 3 & 4 product is represented by Phase I & II described above. Due to limited staff and resources, the County does not intend to produce a Goal 2 product. Columbia County's strategic plan calls for digitally produced maps that conform to ORMAP Goals 3 & 4.

### **1.4 What are the counties primary limitations to moving forward with ORMAP goals?**

The primary limitation for Columbia County to move forward with ORMAP goals is the lack of funding sources available for GIS development. As with many Oregon counties, Columbia County has been experiencing a decrease in revenues in recent years. A second limitation to moving forward with ORMAP goals is limited County staff. Currently Columbia County does not have permanent staff working full-time on GIS development. Staff from Land Development Services and the County Assessor's office contribute time to the project as work loads allow. Pending available funding sources, the County has targeted the Summer of 2004 for hiring a full-time GIS Specialist.

### **1.5 What priority is this project to the county?**

The County is fully committed to developing a county-wide GIS and has devoted resources to achieve a product that conforms to ORMAP goals and standards. From a budgeting standpoint, however, the project remains a low priority for the County. Although the elected officials support the digital remapping and understand the need for a comprehensive GIS program, at the moment there is insufficient revenue to provide annual funding for the project. In light of these budget constraints, the staff from the County Assessors department and Land Development Services have devoted more time to the development of a county-wide GIS.

### **1.6 What county departments are involved?**

The County departments involved in GIS development are Land Development Services; County Assessor's office and the County Surveyor. The County Surveyor role in the project is quite limited and consists primarily of providing a few control points from the government corner restoration fund. For Phase III of the project, the County Surveyor will identify seven government corners to be tied as network control points. However, it is unclear what future contribution to the project there will be from the County Surveyor. The Department of Land Development Services is involved in overall project management and grant coordination. The County Assessors involvement in the project consists of map maintenance; map review and correction and scanning of survey records.

## 2. Status of the Taxlot Base and Digital Production of Taxmaps

### 2. 1. Countywide Taxlot Coverage

2.1.1 What is the current status of the counties taxlot base and of the taxmaps project? Please include reference to the ORMAP Goals 2-4.

#### Status of the Taxmap Remapping Project January 2003

Map Type	GIS Produced	Manually Produced	Total	Percent
<b>Township</b>	0*	16	16	0%
<b>Section</b>	8*	493	501	1.6%
<b>Quarter Section</b>	25*	165	190	13.2%
<b>Sixteenth</b>	60*	230	290	20.7%
<b>Supplemental</b>	4*	21	25	16%
<b>Totals</b>	97*	923	1020	9.5%

\*Meet ORMAP Goals 3 and 4 and thus builds towards completion of Goal 2.

**2.1.2 Does the county actively update this layer? How?**

Columbia County actively updates the taxmaps that have been digitally converted by using macros for ESRI's ARC/INFO GIS.

**2.1.3 Is the county's layer distributed and/or used internally?**

At this time the County Cartographer uses the tax lot layer to update the tax maps following subdivision; partitions and lot line adjustments. The County is in the process of making the layer available to the Department of Land Development Services for daily applications. The County does not distribute the digital maps at this time. The County is currently looking at ways to distribute the maps as phases of the project are completed.

**2.1.4 Is the county's layer available publicly?**

Because only a small area has been digitally converted, the County's digital GIS tax lot data is not available to the public at this time. It is anticipated that full public access will occur upon digital conversion to Goal 4 standards. Hard copies of the tax maps are currently available to the public.

**2.1.5 Is the counties layer integrated with any other systems or databases?**

The County's taxlot layer is not integrated with any other systems or databases at this time.

**2.1.6 In what time frame does the county make updates?**

The County makes updates to the taxlot layer as needed. Typically, the updates occur once a week.

**2.2 Status of Digitally Produced Taxmaps**

**2.2.1 Does the county produce digital tax maps from this data?**

Columbia County produces digital tax maps from this data.

**2.2.2 If partially what areas are done?**

The areas of Columbia County that have digitally produced taxmaps include eight land sections near the City of St. Helens. This area consists of 2826 tax lots and 97 taxmaps. This represents 10.87% of the total number if taxlots in the County.

**2.2.3 What standards do these maps conform to?**

The maps that have been digitally converted conform to ORMAP Goals 3 & 4.

**2.2.4 Are they used by the county and/or any other agencies?**

As digital maps are produced they are used all County departments. Because the maps have only recently been produced they are not used by other agencies at this time. The County anticipates that in the future a wide range of public and private agencies will have access to and use the maps.

### **2.2.5 Is there a manual system running alongside a digital one?**

Because only about 10% of the County has been digitally converted, the manual system is still being used for maps not yet converted. Any updates to the tax assessor maps outside of the already converted Pilot Project area are done on the mylar tax maps utilizing conventional drafting methods.

### **2.2.6 What is the predicted date when the county will have 100% digital assessor's maps?**

The County's GIS strategic plan calls for phased digital expansion. Each year until 2008, a portion of the County will be digitally converted to conform to ORMAP Goal 4 standards. Therefore, it is predicted that the County will have 100% digital assessor's maps in 2008.

## **3. Remapping Procedures and Strategic Approach**

### **What departments or agencies work together in remapping projects?**

To successfully remap the taxlot maps to ORMAP Goal 4 standards will require cooperation of different county departments. The Department of Land Development Services and the County Assessor's Department have worked together the past three years on GIS development.

Because of the lack of production capability within existing County departments, we have relied on an outside contractor for digital map conversion. For Phase I and Phase II, Columbia County contracted with the Oregon Department of Corrections, Engineering Support Unit (ESU) for digital map conversion. The strategic plan calls for the County to continue to contract with ESU for each of the next five phases of the project. For digital map construction, ESU utilizes COGO techniques to digitally capture the courses and angles of surveyed plats, partition plats and record of surveys. Digitizing techniques are used to construct rural meets and bounds tax parcels.

### **3.1. Survey Coordinate Base Development:**

#### **3.1.1 What sources of control points does the county use?**

Columbia County does not have a reliable source for control points. For the Pilot Project a partnership was developed with the City of St. Helens whereby control points used in the conversion to Goal 3 standards was shared between the City and County. For future expansion phases, the County Surveyor may be able to identify additional government corners to be tied as network control points. For primary and secondary control points ESU will subcontract out GPS control services to a private vender. The positions of network control points, GIS mapping control points and photo identification points will be based on ties to the High Accuracy Reference Network (HARN) station "Helen." The projection for all data is to be Oregon Zone North, '83-'91.

For Phase III of the project, Columbia County staff met with ESU and David Evan & Associates and developed an estimated number of survey control points for each portion of the Phase III area according to four geographic areas: urban, urban growth, farmland and resource land. Based on ORMAP Goal 3 & 4 accuracy standards, the number of control points for each geographic area was estimated. For Phase III, the estimated number of control points is 158. For each of the next four phases of GIS development in Columbia County, the same estimating technique was deployed. The tables on pages 10 and 11 show the estimated number of control point for Phases IV-VII.

**3.1.2 In what portions of the county are the control points adequate to meet ORMAP goal 4?**

The only portion of the County where control points are adequate to meet ORMAP Goal 4 standards is the already converted portions within the City of St. Helens Urban Growth Boundary. The number of control point needed for the next four phases of GIS development in Columbia County are shown on the below tables.

**3.1.3 What number of control points are there currently and what number of control points still need to be developed?**

For each of the remaining four phases of GIS development in Columbia County, we have estimated the number of control point required to meet ORMAP Goals 3 & 4. The number of control points that still need to be developed are shown in the following set of tables.

**PHASE IV**

ACCURACY TARGETS	NUMBER OF SECTIONS	# OF CONTROL POINTS	AVERAGE COST PER POINT	TOTAL CONTROL COST
Urban 1-2'	2	18	\$400.00	\$7,200.00
UGB 5-10'	21	105	\$400.00	\$42,000.00
Resource 10-20'	34	68	\$200.00	\$18,000.00*
Total				\$67,200.00

\*Note: Resource total cost includes digital orthophotos used for control identification.

**PHASE V**

ACCURACY TARGETS	# OF SECTIONS	# OF CONTROL POINTS	AVERAGE COST PER POINT	TOTAL CONTROL COST
Urban 1-2'	5	45	\$400.00	\$18,000.00
UGB 5-10'	12	60	\$400.00	\$24,000.00
Resource 10-20'	311	622	\$200.00	\$144,200.00*
Total				\$186,200.00

\*Note: Resource total cost includes digital orthophotos used for control identification.

**PHASE VI**

ACCURACY TARGETS	# OF SECTIONS	# OF CONTROL POINTS	AVERAGE COST PER POINT	TOTAL CONTROL COST
Urban 1-2'	3	27	\$400.00	\$10,800.00
UGB 5-10'	34	170	\$400.00	\$68,000.00
Resource10-20'	113	226	\$200.00	\$56,200.00*
Total				\$135,000.00

\*Note: Resource total cost includes digital orthophotos used for control identification.

## PHASE VII

ACCURACY TARGETS	# OF SECTIONS	# OF CONTROL POINTS	AVERAGE COST PER POINT	TOTAL CONTROL COST
Urban 1-2'	5	45	\$400.00	\$18,000.00
UGB 5-10'	43	215	\$400.00	\$86,000.00
Resource 10-20'	52	104	\$200.00	\$32,500.00*
Total				\$136,350.00

\*Note: Resource total cost includes digital orthophotos used for control identification.

### 3.1.4 Which county department(s) develop(s) control points?

Columbia County does not have a department that develops control points. The Department of Land Developments Services does not have the staff, equipment or training to develop control points. The Columbia County Surveyor operates a quasi-independent business from the County Courthouse and has limited resources for re-monumenting of section corners and collecting digital locations at these corners. The Surveyor is primarily responsible for recording or filling survey records in the County. Therefore, the Control point collection for the remapping areas will be performed primarily by private independent surveyors and will be supplemented on a limited basis by the County Surveyor. For Phase III, the County Surveyor will contribute \$4,000 for control collection from the government corner restoration fund. It is anticipated that a like amount money from the corner restoration fund will be available for future phases.

### 3.1.5 What are the counties limitations regarding the development of control survey points?

The primary limitations regarding the development of control survey points is limited resources and the lack of staff. The Columbia County Surveyor's office functions as an independent private business operating from the County Courthouse. Because of this arrangement, we have had to rely on outside contractors to assist with control work. For Phase I & II ESU sub-contracted with David Evans & Associates (DEA).

## 3.2. Positional adjustments of taxlot boundaries

### 3.2.1 What department(s) are responsible for remapping activities within the county?

The County Cartographer of the County Assessor's office is responsible for remapping activities at Columbia County.

### 3.2.2 What internal positions are this team made up of and will work be outsourced?

The internal positions of the remapping team consist of the Chief Cartographer. Project management and grant coordination is provided by the Department of Land Development Services. The digital conversion work will be outsourced to ESU. A majority of the control work will be sub-contracted with David Evans & Associates through ESU following consultation with the County.

### **3.2.3 What methods are used in positional adjustments?**

For digital map construction, ESU utilizes COGO techniques to digitally capture the courses and angles of surveyed plats, partition plats, record of surveys and the tax lots within. These are aligned with the control points. Digitizing techniques are used to construct rural meets and bounds tax parcels then they are aligned to match the aligned survey and plat data.

### **3.2.4 What software is utilized in this process?**

The software utilized in this process is the Bentley micro-station for COGO and annotation. ESRI Arc/INFO is utilized for digital conversion.

### **3.2.5 What other data sets does this process rely on?**

The tax assessment, survey and county clerk records are all utilized in this process.

### **3.2.6 For counties improving the positional accuracy of taxlots, what other processes are affected by the adjustment of taxlot boundaries?**

N/A

## **3.3. Creation of Digital Taxmaps**

### **3.3.1 What quality control procedures does the county have in place?**

For quality control purposes, the County is in the process of allocating funds for the County Cartographer to work overtime in order to perform map review of converted maps. In addition, the County Assessor's office will maintain the tax lot basemap and data. Maps will be maintained by staff utilizing DOR/ORMAP digital mapping standards in ARC/INFO as part of the A & T quality control program.

### **3.3.2 How many maps does the county convert to digital on an annual basis?**

The number of maps that the County converts to a digital format on an annual basis is shown in the table on page 5 of this document.

### **3.3.3 What department conducts the digital taxmap creation?**

County Departments are not directly involved digital taxmap creation. The County contracts with the Oregon Department of Corrections, Engineering Support Unit (ESU) to digitally convert tax maps. ESU converted the tax lots in Phase II of the Columbia County GIS project. The strategic plan calls for future contract with ESU for digital map conversion.

### **3.3.4 What happens to the manual taxmap once a digital one is created?**

Following the creation of a digital map, the manual tax map is archived and no longer updated.

### **3.3.5 How does the county store and archive taxlot maps?**

The County Cartographer is responsible for storing the tax lot maps. The maps are scanned to Goal 1 specifications and the file burned on CDs. The maps are then tagged as “VOID as of date” and filed in map cabinets in the Tax Assessors office.

### **3.4. Other Taxlot Related Activities**

#### **3.4.1 What other activities are related to digital taxlots within the county?**

Several other activities within Columbia County are related to digital tax lots. These include but are not limited to planning and land use studies and analysis; transportation planning; recording and maintenance of property records and emergency management.

#### **3.4.2 What organizations use these Taxlot maps?**

The Columbia County taxlot maps are used by a variety of organizations. Real estate offices, title companies, other jurisdictions and private surveyors all use the County taxlot maps.

#### **3.4.3 Are taxlot related GIS data sets maintained by other county departments?**

At this time there are no other County departments that maintain or create GIS data sets using taxmap or taxlot data.

#### **3.4.4 How is it distributed?**

Columbia County has not yet determined the method of distribution for Columbia County’s GIS data sets. This process will be established as more of the County is converted to a digital format.

### **3.5 Coordination with other Counties**

#### **3.5.1 What region does the county participate in?**

Columbia County is part of the Northwest Region. The Northwest Region includes Columbia, Clatsop and Tillamook counties.

#### **3.5.2 What neighboring counties do you actively meet with to plan taxlot conversion projects with?**

Columbia County meets with Clatsop and Tillamook counties to discuss taxlot conversion projects and GIS-related issues.

#### **3.5.3 Is there a regional strategic plan?**

A strategic plan for the Northwest Region has been developed, a copy of which can be found on the ORMAP website.

#### **3.5.4 How often are you a part of regional projects or meetings?**

At this time the Northwest Region meets twice a year to discuss GIS development.

## **4. Project Schedule and Progress Tracking:**

### **4.1 What steps does the county expect to take to see a completion of goal 4 accuracy for digital taxlots?**

Columbia County is in the early stages of developing a seamless GIS for the county. It is forecasted that to convert all manually produced taxmaps into GIS maps that meet Goal 4 accuracy targets will take until the end of calendar year 2008. Currently only about 10% of the taxlots have been digitally converted. Section 6 of this strategic plan shows the start and end dates for each of the seven phases planned for Columbia County GIS.

### **4.2 What are the counties estimated production rate given current and estimated funding?**

The production rate for the County is shown in the table on page 5 of this report. Each year from 2003 to 2008 the County will produce a Goal 3 & 4 GIS product for a pre-determined geographic region of the County as indicated by the map on page 4.

### **4.3 What project tracking methods are in place?**

The County is in the process of developing a spreadsheet for the purposes of tracking the progress of each of the GIS expansion phases identified above. Currently, the project is tracked by the Chief Cartographer and the Director of the Land Development Services department. The County is planning to hire a GIS Specialist in the summer of 2004 at which time tracking duties will be assigned to the new hire.

### **4.4 How do you set project schedules?**

The County has set project schedules based on ORMAP Goals 3 and 4 guidelines.

### **4.5 What are the challenges to the county schedule and progress tracking?**

Limited staff is one of the challenges the County faces. The County does not currently have any staff members that are solely assigned to the GIS remapping project. The County would like to hire a full time GIS Specialist by the Summer of 2004. The County Cartographer and planning staff working on the GIS must perform other tasks.

## **5. Staffing and Training**

### **5.1 Will training be required for county personnel to use GIS as a tool for taxlot maintenance?**

The County Cartographer has been trained and is responsible for taxlot maintenance.

### **5.2 What are the composition and numbers of staff involved with the development and maintenance of digital tax lot maps?**

The development of digital tax lot maps is outsourced to ESU. The County Cartographer will be responsible for taxlot maintenance.

### **5.3 To what extent does the county rely on temporary and permanent staff?**

Currently Columbia County does not have permanent staff working full-time on GIS development. Staff from Land Development Services and the County Assessor's office contribute time to the project as work loads allow. Pending available funding sources, the County has targeted the Summer of 2004 for hiring a full-time GIS Specialist.

## 6. Timeline

Phase	Start Date	End Date	Project Area	Status	ORMAP Goal	Funding Source		
						ORMAP	Other	Total
I	2000	2001	Pilot Project	Complete	3 & 4			
II	2001	2002	Expansion of Pilot Project St. Helens UGB	Complete	3 & 4			
III	2003	2004	St. Helens/Sauvies Island	Grant under consideration	3 & 4	\$108,219	\$14,937	\$123,156
IV	2004	2004	Scappoose Region	Planned	3 & 4			\$153,681
V	2005	2005	Vernonia & Western Resource Land	Planned	3 & 4			\$256,782
VI	2006	2007	Clatskanie & Vicinity	Planned	3 & 4			\$205,678
VII	2008	2008	Rainier & Vicinity	Planned	3 & 4			\$202,346
<b>TOTAL to reach Goal 4</b>								<b>\$941,643</b>

**Note:** Total to reach Goal 4 includes the following: control collection; control identification; tax lot conversion; survey scanning; map review and technical support.

<b>7. Contact Information</b>	
ORMAP County Coordinator	Scott Hoelscher
Coordinator's Title	Planner II
Phone Number	503-397-7218
Fax Number	503-366-3902
Email Address	hoelscs@co.columbia.or.us
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