

# CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Sitting as the Governing Body of Tri-City Service District and Clackamas County Service District No. 1

## Policy Session Worksheet

**Presentation Date:** 12/6/2016 **Approximate Start Time:** 1 p.m. **Approximate Length:** 30 min

**Presentation Title:** Solids Handling Concept Report

**Department:** Water Environment Services

**Presenters:** Greg Geist & Lynne Chicoine

**Other Invitees:** Amanda Keller, Matt Glazewski, Doug Waugh, Ed Nieto, Gari Johnson

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

None, this is an informational item.

EXECUTIVE SUMMARY:

Water Environment Services (WES) staff have continued to work to complete the conceptual design for the Tri-City Water Resource Recovery Facility (TCWRRF) Solids Handling Project, following direction from the Board of County Commissioners to maintain the critical path to construction. After a rigorous process involving participation from industry experts and local public works officials, WES staff and the design consultant, MWH Global, have completed a draft of the Conceptual Design Report. The proposed facilities will add solids processing capacity to 2040 in a phased approach, maximize the use of existing facilities, beneficially use biogas, improve operability, contain odors, and increase reliability at the TCWRRF. WES staff will continue to work during detailed design to maximize value to our rate payers.

FINANCIAL IMPLICATIONS:

Is this item in your current budget?  YES  NO

What is the cost? \$37,500,000

What is the funding source? CCSD1 & TCSD Capital Budgets

STRATEGIC PLAN ALIGNMENT

This aligns with WES' strategic goal in that it will help ensure the provision of Wastewater infrastructure necessary to support partner communities and economic development over the next 20 years.

This aligns with the County's strategic goal in that it helps build public trust through good government.

LEGAL/POLICY REQUIREMENTS:

None

PUBLIC/GOVERNMENTAL PARTICIPATION:

The Regional Wastewater Treatment Capacity Advisory Committee has been apprised of the solids handling project since early 2015. A technical committee has convened multiple workshops on technology screening and design in 2016.

OPTIONS:

None, this is an informational item.

**RECOMMENDATION:**

None, this is an informational item.

ATTACHMENTS:

1. Solids Handling Update Presentation

SUBMITTED BY:

Division Director/Head Approval \_\_\_\_\_

Department Director/Head Approval GG

County Administrator Approval \_\_\_\_\_

For information on this issue or copies of attachments, please contact Matt Glazewski at 503-742-4566
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# Solids Handling Improvement Project

## Update

December 6, 2016



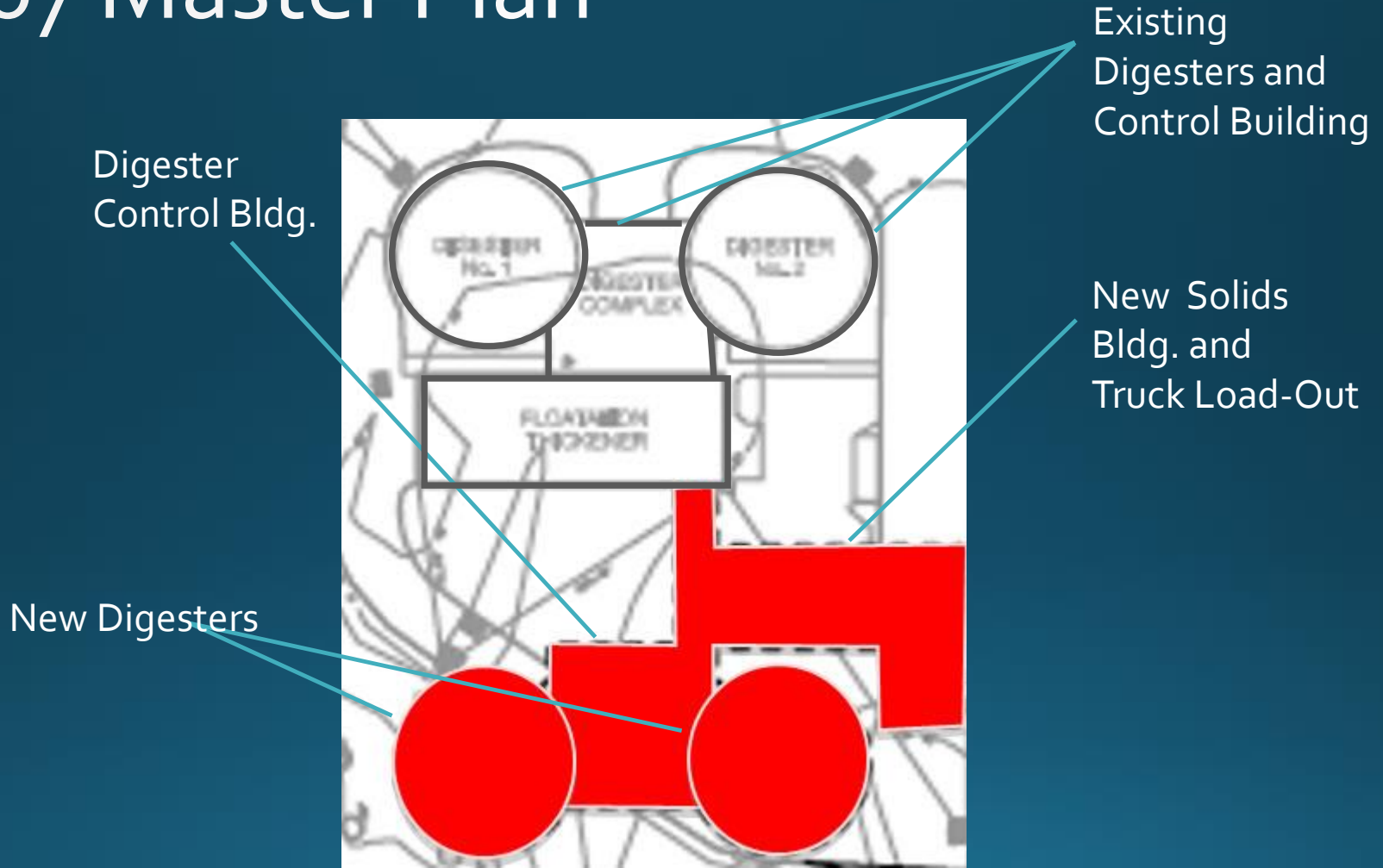
# Solids Handling Project Objectives

- Provide value for ratepayers
- Increase solids handling capability to meet 2040 sludge production
- Continue to produce Class B biosolids for beneficial land application
- Provide capability to upgrade from Class B biosolids to Class A biosolids with *no stranded investment*
- Potential options to produce/enhance revenue
  - Digester gas utilization
  - Septage receiving

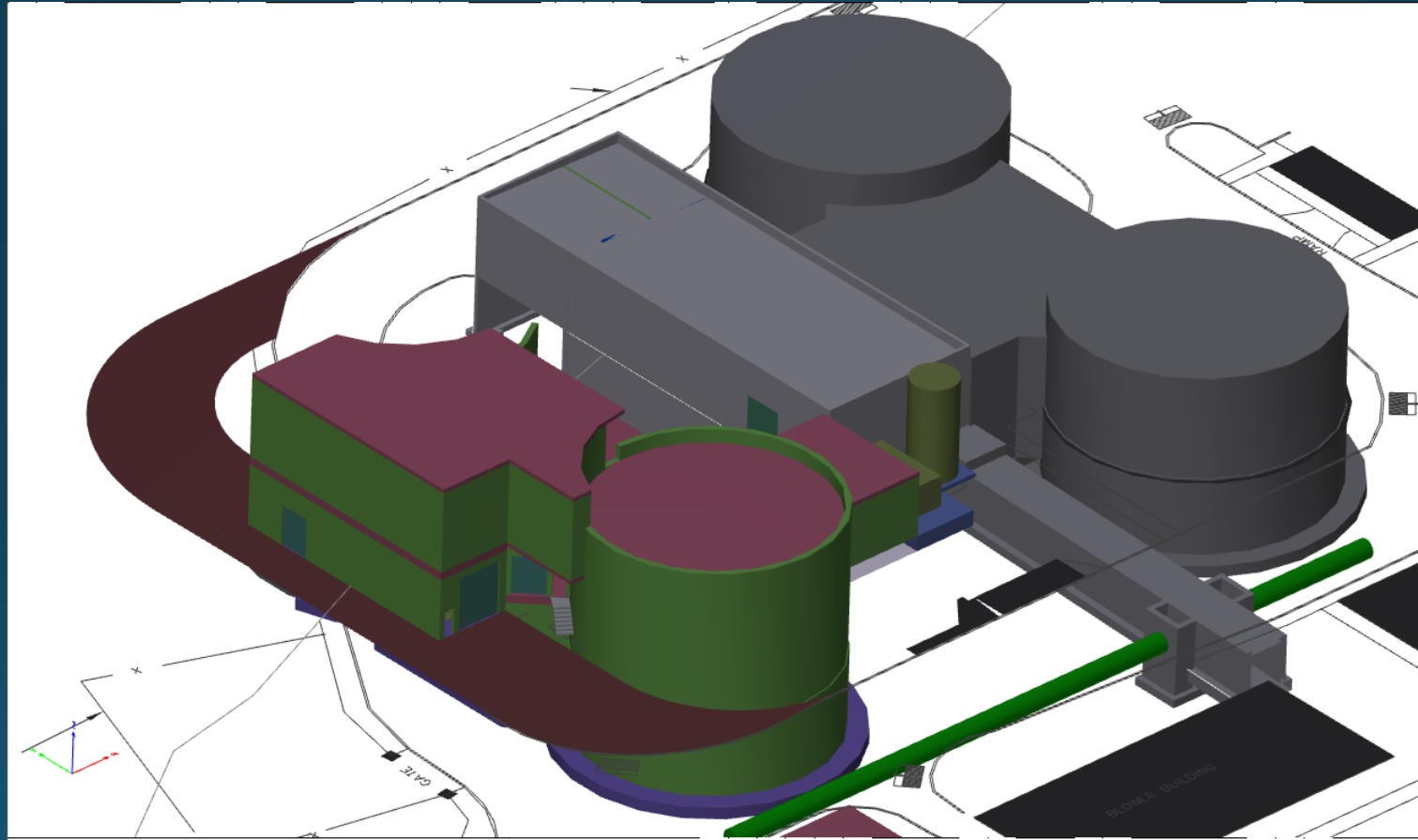
# Regional Committee Meetings

- March 2015: Capacity issue
- May 2015: Growth projections, go-it alone options
- July 2015: Governance
- October 2015: Rates (63/37 split)
- December 2015: Project scope of work
- February 2016: Governance
- March 2016: Population study & technology workshop results
- April 2016: Technology selection
- May 2016: Janicki Bioenergy
- June 2016: Project update
- August 2016: Project update, population study
- November 2016: Project update, co-investment strategy

# Originally Proposed Project – 2007 Master Plan



# Phase 1 to be Constructed by 2020

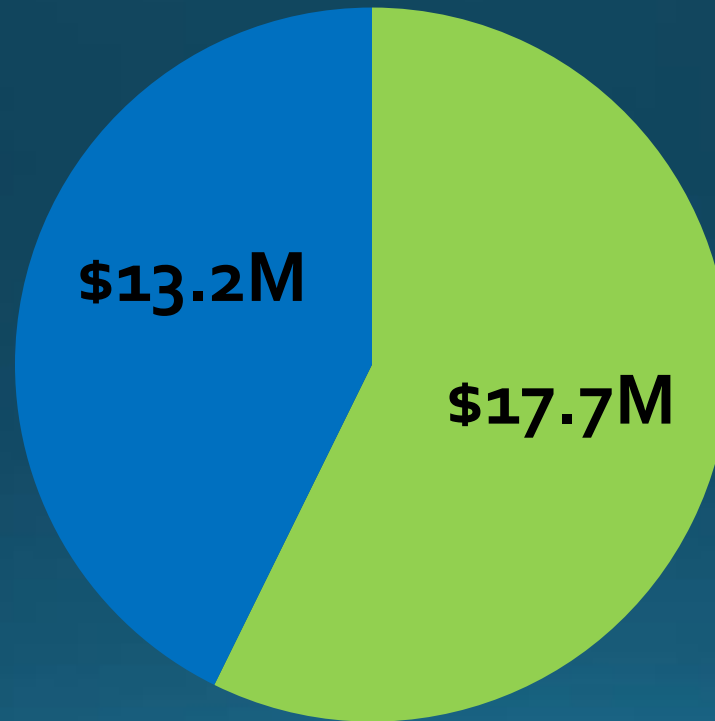


# Phasing Reduces Initial (2020) Construction Cost

Facility	Purpose	Estimated Const. Cost, \$M
Digester and Control Building	Capacity Expansion	12.3
Sludge Blending Tank	Operational Improvement	2.0
Solids Handling Facilities	Capacity Expansion	4.3
Truck Loadout and Cake Storage	Odor Control and Operational Improvement	4.2
Refurbish Existing Solids Facilities	Condition/Reliability	4.4
Emergency Power	Reliability	0.3
Power Distribution	Capacity/Reliability/Condition	3.4
<b>Total</b>		<b>30.9</b>

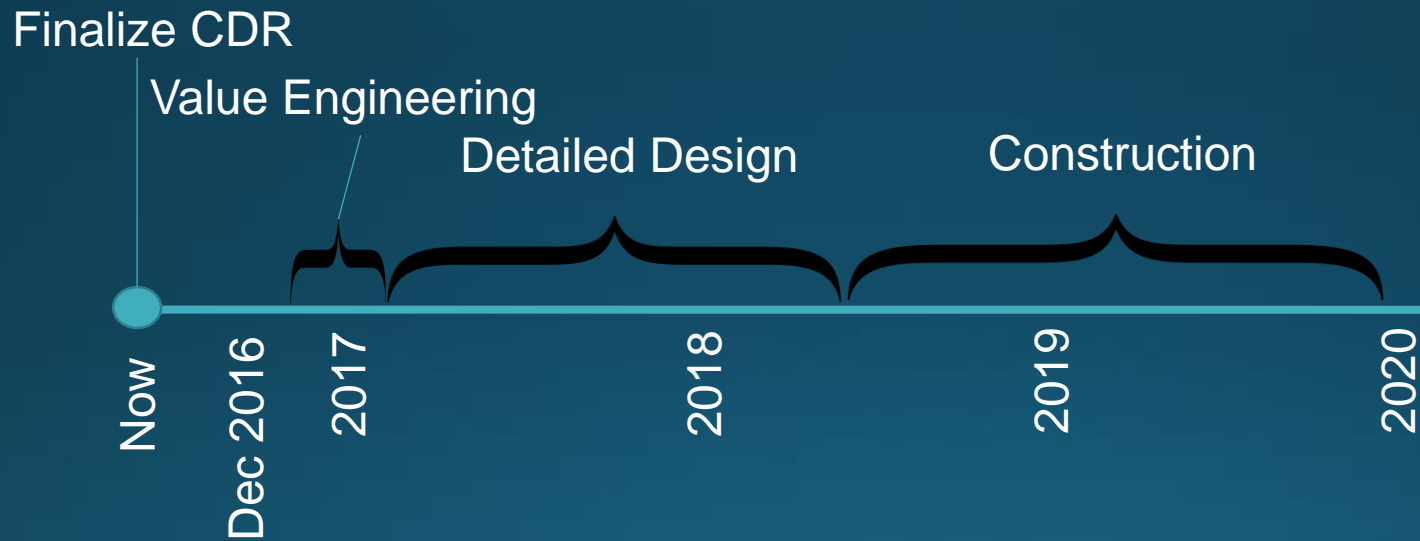


# Estimated 2020 Construction Cost by Purpose



■ Capacity Expansion    ■ Operation/Condition/Odor Control

# Next Steps and Schedule



Questions?

# Parking Lot

Facility	2007 Master Plan	New Approach (Phased)	Purpose
Digesters	2	Phase 1 – 1 by 2020 Phase 2 – 1 by 2030	Capacity
Digester Control Building	✓	✓	Capacity
Sludge Blending Tank	✓	✓	Operation
Solids Handling Facilities	✓	Phase 1 – Improve existing building, add to digester control building	Condition/Capacity
Truck Loadout and Cake Storage	✓	✓	Odor control/Operation
Centrifuges	✓	Phase 1 – Replace equipment to allow extended operation Phase 2 – Add equipment	Capacity
Centrate Equalization	✓	Phase 2, if required	Capacity
Emergency Power	✓	✓	Reliability
Relocate Electrical Gear	✓	✓	Reliability
Combined Heat/Power	✓	Separate project with funding opportunities	Power generation

# Historical Perspective

## Oregon City sewer squeeze affects Gladstone's plans

By JOE GOODWIN  
EC Staff Writer

sewer connections created  
12—Enterprise Courier, Oregon City, Oregon, Thursday, June 7, 1979

charged by the city. He said new hookup fees there would be \$500 each, starting July 1, as opposed to Gladstone's \$350.

Strobel said Gladstone could continue to bill the city for the county, however, since the city will continue to provide sewer service. He proposed charging the

high-density zoning request for 1.17 acres of property between Caldwell and Wall Streets recently annexed by Gladstone.

## Oregon City argues over sewer plans

Oregon City should consider whether it wants to remain part of a proposed Tri-City sewer district or make plans to expand its current sewage treatment plant now shared with Gladstone, Mayor McKnight said Wednesday.

City officials are in a bind with a DEQ ordered building moratorium placed in Oregon City and parts of Gladstone because of current sewerage problems.

Citywide

File: Oregon City 57

city is obligated to make new connections, even without those connected to a "strong comment" to more commercial development and asked the commission to provide sewer connections to region City.

moratorium is "stupid" because more connections to the city treatment plant, DEQ and the Environmental Protection Agency have not allocated any funds for Tri-City.

## Continuing Growth Taxes City Sewer Plant



## City defers action on remaining permits

By PAUL C. MEIRZ  
EC City Editor

The Oregon City Commission, standing firm amid charges of "hypocrisy" and without delay, Wednesday night deferred for two days a decision on release of the last 79 sewer hookup permits available in the city for the next five years.

At the same time, commissioners — expressing concern over an earlier "rush to judgment" — voted to withhold decision until next month on a proposed scheme which would transfer an additional 281 sewer hookups to Oregon City from the City of Gladstone.

"We made one hellaciously fast decision two months ago," said Commissioner Bob Andrew, "and it would be foolish tonight to issue the rest of our permits on a catch-as-catch-can basis."

"It's a tough situation," agreed Commissioner Ed Allick. "We charged in with a few builders, then a few more, and we're going to appease a few more tonight. I don't feel we should take the pressure off of any individual builder. I want to talk about the people — the guy with one lousy lot who needs a sewer hookup permit."

Commissioners last month agreed to issue the 79 permits, Wednesday night, on a case-by-case basis of "hardship" and individual need, requests for a total of 197 hookups had been received.

Mayor Dean Nichols asserted that at least 50 of the don't issue their permits now — not 30, 40 or 50 — it's now — it's going to cost some people \$50,000 or \$60,000. It was our intention to take care of these people."

Nichols, who had the letters in hand, contended that 25 to 30 builders are "in a position of severe hardship" and will probably go bankrupt, if they don't get immediate relief.

"How are we to determine hardship when one commission member gets the letters and the others don't?" asked Commissioner Alysne Woolsey.

City Engineer Bill Parrish said the applications were taken "without qualifications. They include everything from builders who really need permits to a subdivision that hasn't even been approved yet."

Commissioners drew more fire from builders when they refused to approve the Gladstone transfer proposal — presented by the Clackamas County Home Builders Association — before it had been reviewed by city staff and by the Oregon City Planning Commission this month.

"It sounds to me like there's hypocrisy here," said Dick Smelter of Smelter Homes, who first obtained 87 of the scarce hookup permits when they were issued two months ago.

"When the industry is hurting, business is hurting," Smelter contended, "and workers are hurting."

"How about giving back 10 of your permits?" said Commissioner Ed Allick.

"You didn't have to cause people who represented themselves honestly," said Smelter, defending his firm against commission criticism by contending that the 87 permits were the number requested in the first place.

"Are there any permits we can get back tonight?" asked Allick. "I don't even make sense, Mr. Allick," said Smelter, leaving the floor abruptly.

The two-day delay to evaluate "hardship" requests was also criticized by two other builders and real estate representatives in the audience, most of whom had expected allocation of permits Wednesday night.

"The commission can't ever sit down and read these letters," said City Engineer Bill Parrish. "I'd like to re-read some of the letters that were written to us two months ago," said Commissioner Bob Andrew.

The 79 remaining sewer hookup permits — or a number to be determined — will be issued by the Oregon City Commission at a special meeting scheduled at 6 p.m. Friday in City Hall.

## Sludge raises havoc 'Digester' troubles officials

By GARY CORNELIUS  
EC News Editor

Oregon City officials expect to have a "digester" at the city sewage treatment plant back in operation today, ending 10 days of hectic regular efforts which included a city employee breaking a leg, a 13-year-old boy falling into a trench full of "sludge," consultations with state pollution officials and help from the City of Portland.

The digester is a huge piece of equipment which processes that part of sewage such as rags and pieces of plastic which can't be processed with everything else.

City Manager Al Simonson told commissioners Wednesday that things may be back to normal, although the parents of the youth who fell into a two-foot deep sludge trench "are less than happy."

He said he has contacted the city's liability insurance carrier because of possible legal action. The youth was not hurt, Simonson said, "but was pretty shaken up."

The youth fell into a trench, which city employees dug in an unused portion of Mt. View Cemetery in which to dispose of sludge, which ordinarily would be processed by the digester and used by Clackam County farmers who spread over their pastures as fertilizer.

A report by City Engineer Parrish indicated the digester first began malfunctioning Feb. 5. Sewage treatment employees began a series of steps which included adding tons of bicarbonate of soda — 15,000 gallons of "digester fluid" to the digester, but after six days the digester still was working properly and the sludge was made to pump thousands of gallons of sludge

## Oregon City growth frozen for five years

The future growth of Oregon City for the next five years, at least — was brought to an abrupt halt Wednesday night by the Oregon City Commission.

Commissioners, acting in the wake of new state legislation, voted to stop accepting applications for new subdivisions, planned developments, conditional use permits, divisions, planned developments, or the absence of new reservations, existing connections, or the absence of new sewer lines.

The action was taken on the recommendation of City Planner Jim Baily, City Atty. John Anlicker, state officials, and the Oregon City Planning Commission's meeting which was already on the table at Wednesday's meeting.

It became a topic of controversy, however, as commissioners voiced a number of basic philosophical differences of opinion regarding the geographical growth of the city.

Acting against the recommendation of its Planning Commission, with Mayor Dean Nichols leading the dissent, commissioners voted 3-1 to continue with the annexations, as long as the property owners are aware that there will be no sewer service.

The Planning Commission, in a meeting May 24, had recommended the city formally close the door on all new annexation until the sewer crisis is resolved — a process which officials predict will take at least five years.

Nichols, arguing in favor of retaining annexation options, predicted massive development on the fringes of the city if officials adopted a "closed-door" policy on annexations.

"Where are the people going to go if they can't annex? They'll go outside the city limits," said Nichols. "By a limited growth, or no-growth policy, the city is contained. People are going to build outside the city limits. They'll go to the county for approval, and build homes as they can build. And the state will then force us to provide sewer service for them," Nichols predicted.

Commissioner Bob Andrew, agreeing with Nichols, contended that "our best interest" can be served by making judicious analysis of annexation proposals, so

they don't wind up as a "basket on the doorstep" that we can't handle."

Commissioners agreed, however, that it is unlikely the city will receive new annexation proposals in any case until the sewer issue is resolved — regardless of which "formal policy" was adopted Wednesday night.

"We have to make it clear to people that if they're going to be annexed, there's no sewer," there could be for other reasons other than development — for other city services are also "strained already," Commissioner Alysne Woolsey argued her belief that "other city services are also strained based on sewer annexations for that matter."

Commissioner Allick also argued her belief that "other city services are also strained based on sewer annexations for that matter."

"I'll be amazed if anybody wants to annex into the city," said Commissioner Allick, "but a new city," said Commissioner Allick, "warned fellow commissioners against proceeding with the expansion sewerage plant would be approved for funding by the voters."

"We may have to do it all ourselves (through expansion sewerage plant)," said McKnight, contending it would be "wrong to create any further potential sewage demands."

"In other words, no more annexations," said McKnight. "There are no annexations, as long as the property owners are aware of the existing situation."

McKnight, who originally sided with Woolsey on the annexation freeze — creating a 2-2 deadlock on the annexation freeze — as long as the property owners are aware of the existing situation.

Commissioners voted to continue to accept plan change and zone change applications — but to "proceed cautiously" with approvals to avoid misleading applicants concerning the availability of sewers.

The city's new policy met its first test only an hour after passage, as commissioners rejected a proposal for annexation of a group of properties on a 95-acre parcel in the area of Central Point, Warner-Parrott and South End Roads.