



Clackamas County Service District #1 Wastewater Plan Discovery Survey Final Report

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CC Service District #1 Wastewater Discovery Survey Background

Since February 2006, the Citizen Advisory Council¹ (CAC) has been developing a decision framework to aid them in making a recommendation on a strategic wastewater plan that they feel best suits the treatment needs of Clackamas County Service District #1. In August 2006, the Water Environmental Services² (WES) division of Clackamas County contracted InfoHarvest to communicate the decision framework being developed by the Citizen's Advisory Council to the general public and gather the public's feedback on the decision framework. The online Discovery Survey that InfoHarvest designed in conjunction with the Citizens Advisory Council and WES staff went live to the public on August 31st, 2006 and closed on September 10th, 2006. Paper submissions were also accepted. Given the urgency of the CAC's schedule, InfoHarvest presented a preliminary report to the CAC's Communications sub-committee on September 12th, 2006. This document provides a fuller account of what was learnt from this public outreach.

The Discovery Survey

CAC's Strategic Wastewater Plan Decision Framework

When InfoHarvest was engaged, the CAC and WES had narrowed the number of strategic wastewater plans down to the following five (5)³.

- **A1 Maintain Kellogg, Send Excess flow to Tri-City**
- **A2 Maintain Kellogg, Send Excess flow to New Plant**
- **B1 Expand Kellogg, Send Excess flow to Tri-City**
- **D1 Send All Flows to Tri-City, Close Kellogg**
- **D2 Build New Plant, Close Kellogg**

The CAC had identified a number of principles and associated criteria⁴ they intended to use to help discriminate between these five alternatives. For each principle they identified a number of criteria that would help estimate how well each alternative wastewater plan met those principles.

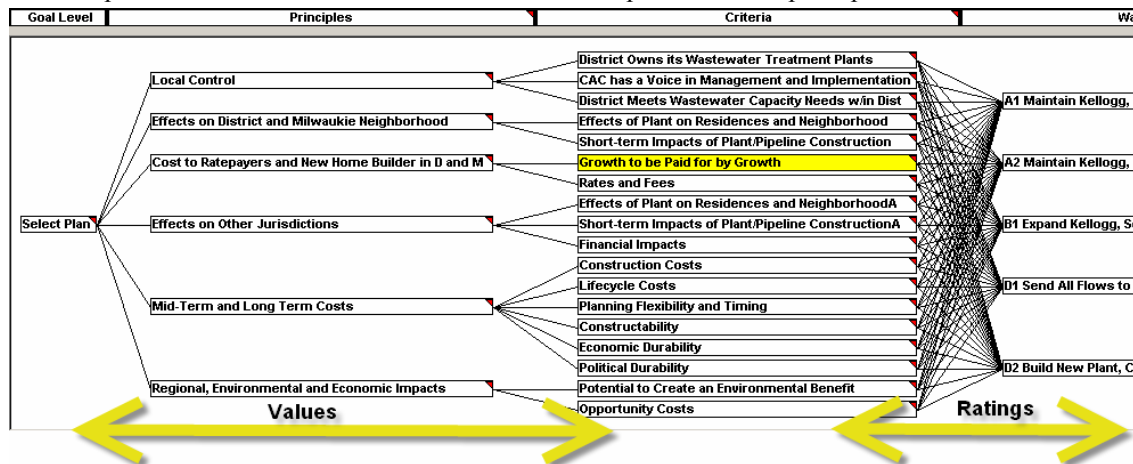


Figure 1: Decision Framework of Principles, Criteria and Alternative Wastewater Plans

The combination of principles, associated criteria, scales for measuring how well alternatives do with respect to those criteria, scales for measuring the importance of principles and criteria, and the text that describes all the above together comprise the CAC's Decision Framework.

The CAC rated each alternative wastewater plan against each criterion. While initially these ratings were estimated qualitatively, an engineering firm was contracted by WES to develop quantitative estimates for

¹ <http://www.co.clackamas.or.us/wes/contact/citizenmin.htm>

² <http://www.co.clackamas.or.us/wes/>

³ http://www.co.clackamas.or.us/wes/meetings/A4FStudy_3.pdf

⁴ <http://www.co.clackamas.or.us/wes/meetings/FinalTechMemo22.pdf>

criteria such as Construction and Lifecycle costs. The concept was then to treat either all criteria or all principles as equal, and use the ratings as a guide to determine which plan to recommend.

Online Discovery Survey Concept

Obtaining the public's feedback on complex community decisions involving a choice between defined alternatives poses two major problems. The first is that such decisions are by their nature complex, and citizens lead busy lives, with many competing demands on their time. The second is that while most citizens have strongly held general values when it comes to decisions affecting their community, they will often modify those values when faced with actual, predefined alternatives. This happens because values that appear clear in the abstract often end up being traded off in real world solutions. Since the CAC was looking for feedback that might help them decide on which of the five strategic plans to recommend, these modified values might provide more insight to the CAC when making that recommendation.

Accordingly InfoHarvest formalized the decision framework described above as a classical multi-criteria decision analysis model. To obtain a measure of the public's values when looking at the wastewater challenges facing the service district, InfoHarvest proposed an online discovery survey. This survey would provide a description of the decision framework and ask the public to directly weigh the relative importance of the principles and criteria based on their own values. At all stages open comment fields would give survey takers the opportunity to share additional thoughts, such as principles and criteria that seemed missing from the decision structure. Once the survey takers had provided their initial values, they would then be shown a table indicating how well each alternative would meet their values,. Additionally, they would be invited to investigate why they received the results they did, and potentially modify their values in the face of the actual alternative plans available.

[In that sense, this discovery survey is *not* a traditional opinion survey, nor a voting tool. Survey takers are encouraged to go back and modify their values as they consider the tradeoffs inherent in the predefined alternatives.](#)

Discovery Survey Description

The discovery survey that InfoHarvest developed in conjunction with the CAC and WES comprised of the following components (see Appendix C below for screenshots of the online survey):

- ❖ Welcome – a page with background information about the wastewater planning challenge on hand, the CAC and how to use the survey itself
- ❖ Your Neighborhood – a page asking the survey taker where they reside and work
- ❖ Your Values – a page that asks the survey taker to indicate the relative importance, to them selves, of Principles and associated Criteria. The five point qualitative scale used to capture importance was [Most Important, Very Important, Important, Less Important, Not Important].
- ❖ Your Results – a page that shows how well each of the alternatives fit their values?
- ❖ (Optional) See Why – a page that shows a breakdown of the best fit results in terms of individual principles
- ❖ Finish/Comments – a page thanking the survey taker, providing them with a user ID to return to the survey, and another opportunity to share overall thoughts before leaving the survey

In addition, two other windows were also included for optional viewing.

- ❖ CAC Preliminary Ratings screen - shows the CAC's ratings of alternatives at the time of the survey
- ❖ The Document Map screen – an overview of the decision framework with hyperlinks to source documents

The contents of these last two windows is described in the following two sections.

CAC Preliminary Ratings

At the time the survey was launched, the CAC had identified eighteen (18) criteria with respect to which they would measure each of the alternatives.

How were the Ratings Measured?

As a preliminary ratings exercise, the CAC evaluated all five alternatives against the eighteen criteria using a qualitative five point ordered scale [--,-,0,+,++] where ++ indicates that an alternative would have the highest possible rating for a given criterion, while -- means that the alternative had the lowest possible rating for a given criterion. The sense of the scale was always such that a ++ or + score against a criterion meant that, on that criterion, the alternative would be a positive choice for the District. For example on Construction Costs, the more expensive Alternatives would be given – or - - ratings, while the less expensive ones would be given + or ++ ratings.

Wastewater Plans	A1 Maintain Kellogg, Send Excess flow to Tri-City	A2 Maintain Kellogg, Send Excess flow to New Plant	B1 Expand Kellogg, Send Excess flow to Tri-City	D1 Send All Flows to Tri-City, Close Kellogg	D2 Build New Plant, Close Kellogg
District Owns its Wastewater Treatment Plants	-	++	+	--	++
CAC has a Voice in Management and Implementation	-	++	+	--	++
District Meets Wastewater Capacity Needs w/in Dist	-	+	0	--	++
Effects of Plant on Residences and Neighborhood (District & Milwaukie)	0	0	-	++	+
Short-term Impacts of Plant/Pipeline Construction (District & Milwaukie)	0	-	-	++	-
Growth to be Paid for by Growth	0	0	0	0	-
Rates and Fees	+	-	+	-	--
Effects of Plant on Residences and Neighborhood (A=Other Jurisdictions)	-	++	-	--	0
Short-term Impacts of Plant/Pipeline Construction (A=Other Jurisdictions)	-	++	-	--	++
Financial Impacts	+	-	+	++	-
Construction Costs	+	+	--	++	0
Lifecycle Costs	+	-	0	+	-
Planning Flexibility and Timing	+	++	++	-	-
Constructability	++	+	+	--	-
Economic Durability	+	+	+	-	+
Political Durability	--	-	--	-	+
Potential to Create an Environmental Benefit	-	-	-	0	++
Opportunity Costs	0	-	0	+	0

Table 1: CAC Preliminary Ratings for the Five Alternative Wastewater Strategic Plans

These are the ratings shown on the CAC Preliminary Ratings screen reachable from the Results and See Why windows of the online discovery survey and used in the calculation of best fit results (see next section).

Note: For the first twenty eight hours the survey was online (Thursday August 31 2006 Noon – Friday September 1st 2006 4PM) four of the criteria had different ratings.

<i>Wastewater Plans</i>	<i>A1 Maintain Kellogg, Send Excess flow to Tri-City</i>	<i>A2 Maintain Kellogg, Send Excess flow to New Plant</i>	<i>B1 Expand Kellogg, Send Excess flow to Tri-City</i>	<i>D1 Send All Flows to Tri-City, Close Kellogg</i>	<i>D2 Build New Plant, Close Kellogg</i>
District Owns its Wastewater Treatment Plants	-	+	-	--	++
CAC has a Voice in Management and Implementation	-	+	0	--	++
Growth to be Paid for by Growth	-	+	-	++	++
Construction Costs	++	0	-	++	--

Table 2: Original Values of Ratings for 4 Criteria that were Updated

The peer reviewed construction data had just arrived from HDR, and they clearly invalidated the initial estimates for Construction Costs in the 4th row above. Ratings for the other three criteria had also come under review, and the CAC updated them to reflect their understanding of how they should be measured. The updated values for the four criteria were communicated to InfoHarvest and updated online. (See the section, general Approach to Updating Ratings, below.)

For the record, all of the 17 people resident in Milwaukie who took the survey in that first 28 hour period, saw, based on the original ratings, either D1 or D2 as the best fit to their values. With the updated ratings that were uploaded and used for the remaining nine days of the survey, 16 of the 17 would still have seen D1 or D2 as providing the best fit. For the one person that would have been shown A2 as the best fit, D2 would have been very close as the next best fit.

How are Ratings used to calculate Best Fit Results?

Combining a survey taker’s values with a set of ratings for the alternatives, the discovery survey calculates a single number for each alternative that tells how well that alternative fits the individual’s values. This number is called the best fit, and takes numeric values between 0 and 1, where 1 would be a perfect match, and 0 no match at all. In this section we provide an overview of how that calculation works.

Qualitative	Normalized
++	1
+	0.75
0	0.5
-	0.25
--	0

Table 3: Scales Conversion

1. Using a standard approach to multi-criteria decision analysis named Simple Multi-Attribute Rating Technique or SMART⁵, the ratings are “normalized” to an internal scale that runs from [0,1], where the relationship of the CAC’s qualitative ratings scale and this normalized scale is shown in Table 3.

2. The survey takers’ values measured on the Importance Scale are also normalized but in a three step process. First, the qualitative scale is converted into a numeric scale from 0 to 100. This numeric scale is in turn normalized using the following simple relative normalization algorithm:

⁵ <http://www.infoharvest.com/ihroot/infoharv/infoharvestfaq.asp#What%20SMART>

$$\text{Normalized Value} = \frac{\text{Numeric Value}}{\text{Sum (Numeric Values)}}$$

So for instance, if a survey taker assigns the following values to a set of criteria (See Table 5), Very Important, Less Important and Important, the corresponding normalized values are 0.5, 0.17 and 0.33 respectively.

Qualitative	Numeric	Normalized
Most Important	100	Algorithm
Very Important	75	Algorithm
Important	50	Algorithm
Less Important	25	Algorithm
Not Important	0	Algorithm

Table 4: Normalizing Values Importance Scale

Criteria for principle Effects on Other Jurisdictions	Value	Numeric	Algorithm	Normalized
Effects of Plant on Residences and Neighborhood	Very Important	75	=75/150	0.50
Short-term Impacts of Plant/Pipeline Construction	Less Important	25	=25/150	0.17
Financial Impacts	Important	50	=50/150	0.33
Total		150		

Table 5: Normalization of Importance Values

3. The survey taker assigns relative importance to the principles, and then in turn to the criteria associated with each principle. Assigning great importance to a principle, and then to a criterion associated with that principle gives that criterion great weight in the outcome of the model. In fact the overall weight of a criterion, called its model weight, is calculated by multiplying its relative normalization as a criterion with respect to its principle, by the normalized weight of that principle with respect to the other principles.

4. The fit of an alternative to a survey taker's weights is then calculating by multiplying the normalized rating of the alternative with respect to a criterion by the model weight of that criterion, then summing the products for all the criteria. This is then repeated for each alternative in turn.

All 18 Criteria	A1 Maintain Kellogg, Send Excess flow to Tri-City	Model Weights	product for each criterion
District Owns its Wastewater Treatment Plants	0.25	0.045	0.01
CAC has a Voice in Management and Implementation	0.25	0.05	0.01
District Meets Wastewater Capacity Needs w/in Dist	0.25	0.057	0.01
Effects of Plant on Residences and Neighborhood	0.5	0.112	0.06
Short-term Impacts of Plant/Pipeline Construction	0.5	0.066	0.03
Growth to be Paid for by Growth	0.5	0.097	0.05
Rates and Fees	0.75	0.081	0.06
Effects of Plant on Residences and Neighborhood	0.25	0.046	0.01
Short-term Impacts of Plant/Pipeline Construction	0.25	0.029	0.01
Financial Impacts	0.75	0.045	0.03
Construction Costs	0.75	0.031	0.02
Lifecycle Costs	0.75	0.035	0.03
Planning Flexibility and Timing	0.75	0.029	0.02
Constructability	1	0.03	0.03
Economic Durability	0.75	0.033	0.02
Political Durability	0	0.023	0.00
Potential to Create an Environmental Benefit	0.25	0.101	0.03
Opportunity Costs	0.5	0.088	0.04
Best Fit result			0.48

Table 6: Best Fit Calculation for A1, Demonstrating that the Best Fit Result is the Sum of Products

Best Fit for Model where all Values are Equal – the “Default Survey”

An insight into the CAC’s Preliminary Ratings used for none out of 10 days of the survey is given by considering a survey in which all the principles are considered to be of equal importance and the criteria associated with each principle are considered equally important in measuring the fit of an alternative to that principle. In the actual survey, this was the default set of values for each of the value screens, and we refer to this as the “Default Survey”.

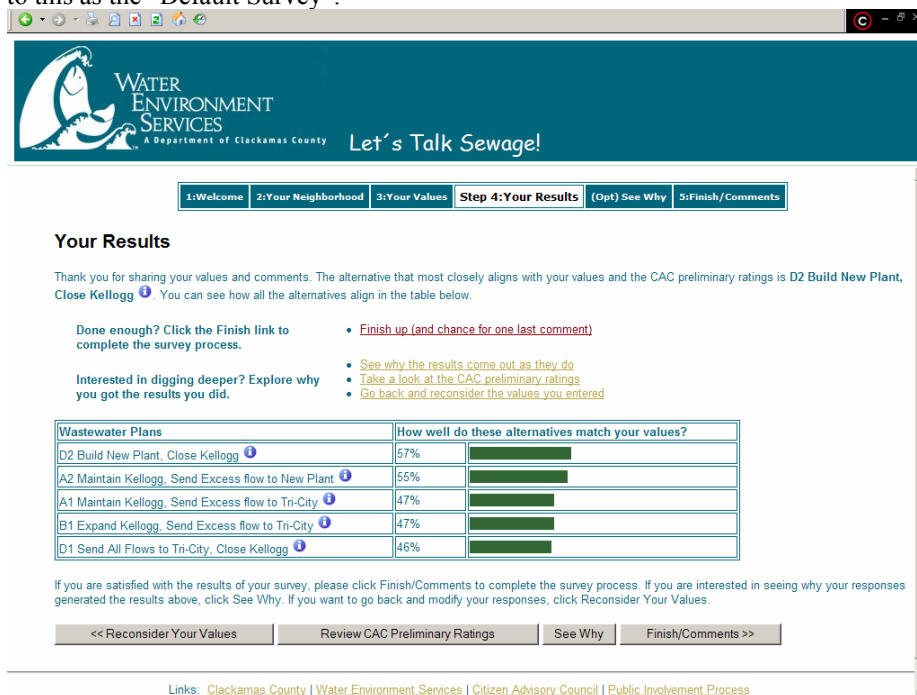


Figure 2: Best Fit for Survey where Principles and their Criterion are all **Important**

As can be seen from the Your Results screen shot, the CAC’s Preliminary ratings support alternative [D2 Build New Plant, Close Kellogg] as a slightly better fit than [A2 Maintain Kellogg, Send Excess Flow to New Plant].

Though these two alternatives share the common element of building a new plant their ratings vary considerably as can be seen from this head to head comparison of the two alternatives’ best fits.

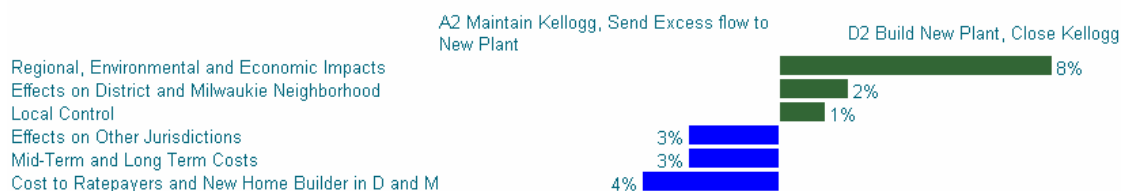


Figure 3: Head-to-head comparison of best fit D2 with next best fit A2

Figure 3: Head-to-head Comparison of D2 and A2 at the Level of Principles

General Approach to Updating Ratings

One advantage of establishing a formal decision framework is that the validation of the decision process can begin before all expert ratings are gathered. By asking for the public’s feedback in terms of both values and open-ended comments while ratings are still preliminary, the CAC can obtain early indicators as

to whether their framework is a) capable of discriminating between alternatives, b) comprehensive and c) can transmit values. As ratings that are more accurate become available, usually through the completion of expert studies, the ratings are updated to make the framework more accurate. In the best case, as more reliable estimates for ratings become available, they are immediately updated and the original survey takers invited to return and reconsider their values. Typically, as ratings become clearer, so too do the tradeoffs inherent in each alternative and the survey taker may update their values so that the tradeoffs truly reflect their values.

With the schedule under which this discovery survey was operating, there was only time to have the public provide a first appraisal of the survey. The hope was that expert estimates for life cycle costs, rates and fees and other criteria would be available before the survey was launched but this was not to be.

Document Map

The CAC and WES have posted an exhaustive set of meetings minutes, technical memos, calendars and other relevant documents on WES’s Let’s Talk Sewage website at (<http://www.co.clackamas.or.us/wes/contact/citizenmin.htm>). For members of the public who haven’t attended the many public meetings and followed the CAC’s process over the last eight months, the Document Map provides a quick bridge between the decision framework described and used in the discovery survey and the many related documents on the Let’s Talk Sewage website.

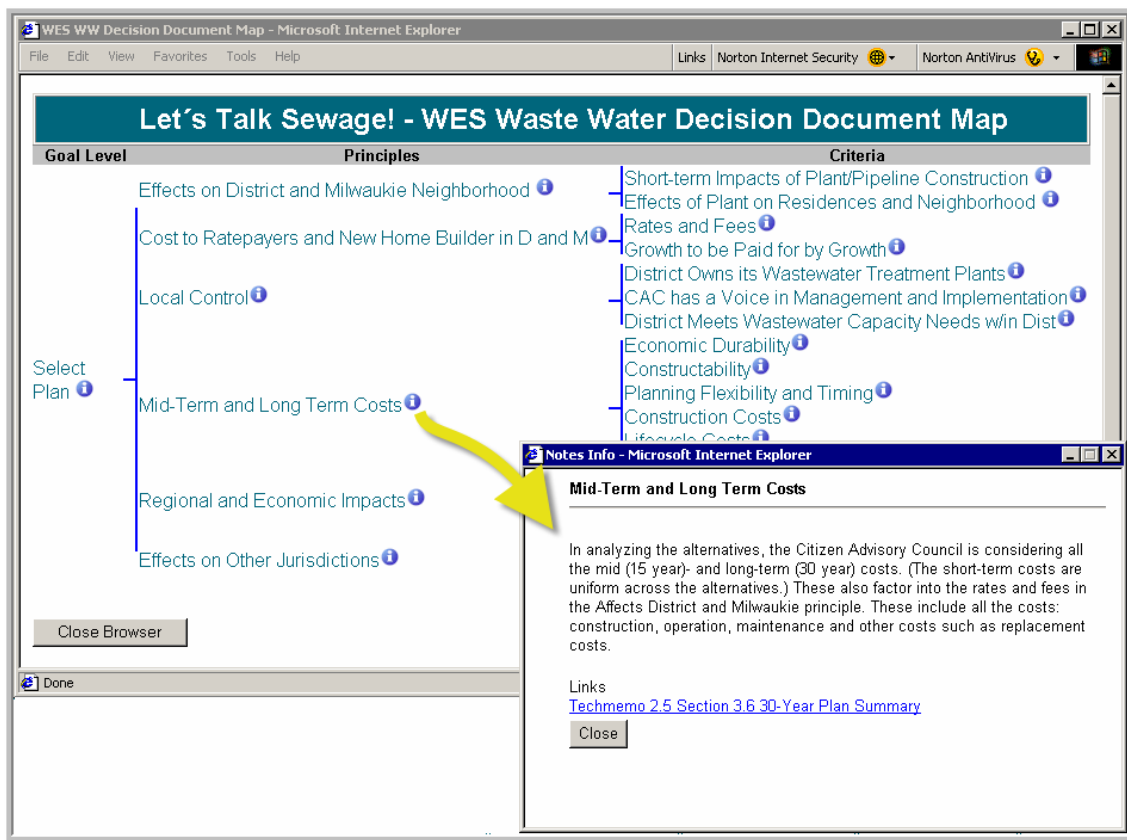


Figure 4: Document Map has I-buttons that Open Notes Info Windows

The Document Map shows the relationship between the principles and the criteria. Beside each principle and criterion this window displays an information or i-button - **i**. Each i-button provides short notes on the principle or criterion, and in many cases links to relevant background documents. In the above screen capture of the DocumentMap, clicking the i-button for the principle [Mid term and Long term Costs] pops up the Notes Info window shown. The Notes Info window in turn contains a link to Techmemo 2.5 on

WES's Let's Talk Sewage website, and indicates that the relevant text is contained in Section 3.6 30-Year Plan Summary. Most of the linked documents are in the PDF format which can be displayed by most browsers and printed by most printers.

I-buttons Available in the Discovery Survey

I-buttons and Notes Info windows for the alternatives are accessible within the survey itself. The i-buttons for the alternatives also provide a rich set of links.

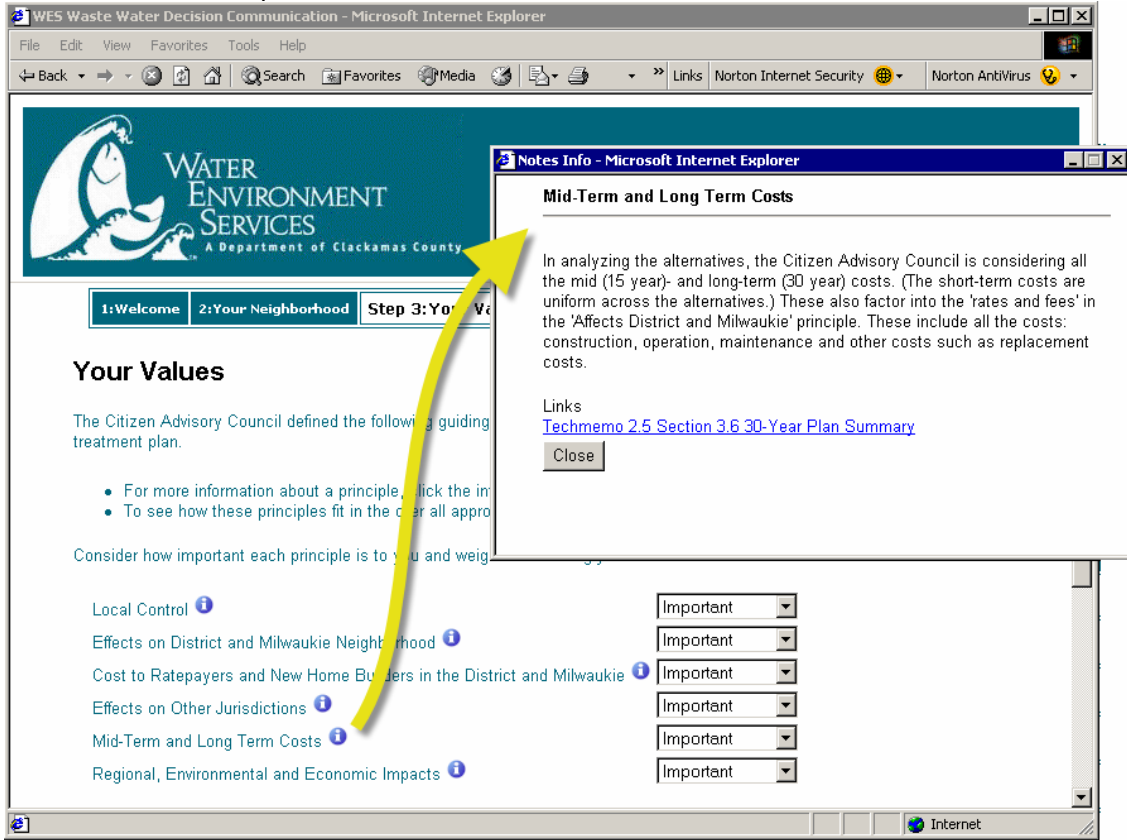


Figure 5: Access Info Notes directly from the Survey Pages by Clicking I-buttons

Survey Response

This section of the report summarizes how many people accessed the discovery survey, how much they utilized and basic statistics on who they are and what they provided for values and comments feedback.

Survey Usage

The discovery survey was open to the public from noon August 30th through midnight September 10th. Three surveys were received by regular mail and are included in all analysis, and for tabulation purposes they are treated as arriving on the last day of the survey.

Discovery Survey Scope

The discovery survey was open to all, whether or not the survey taker is a rate payer of Service District #1.

Discovery Survey Identity Management

The survey was anonymous, with a user ID being made available at the end of the survey that could be used copied and used to enter the survey again at a later time. Since the purpose of the discovery survey is to inform and get general feedback, InfoHarvest gathered no information that could identify an individual, other than encoded IP addresses associated with the machine the survey takers were using, and these are only decoded or checked upon request. No such request was received for this project.

Depth of usage	Survey takers	%
Saw Your neighborhood page	360	100%
Completed Your neighborhood page	327	91%
Edited Values	307	85%
Left any Comments	128	36%
Visited optional See Why Page	85	24%

Table 7: Survey Usage Totals

Viewed Your Neighborhood Page

Over the ten day period 360 visitors clicked from the Welcome page to the Your Neighborhood (Profile) page. Once a user clicks the Start button on the Welcome page, the Your Neighborhood page appears, and they are recorded as having seen the Your Neighborhood page.

Completed Your Neighborhood Page

The Your Neighborhood page asks the survey taker from what perspective they are taking the survey and where they are resident or own a business, and in each case to provide a zip code. Thirty three (33) people saw that page and abandoned the survey without continuing. While some may have just come to reconnoiter and may well have come back later and taken the survey, it is also likely that this page may have confused survey takers, for while map was supplied, the visual cues on the map did not directly match the answers to the questions asked.

Edited Values

Three hundred and seven (307) survey takers made a change to at least one of the default values in the survey. That leaves twenty surveys (327-307 = 20) where no change was made to any value, and only in two of these cases was any comment left. Nonetheless, it was decided in the preliminary survey report to the CAC Communications sub-committee that these 20 should be kept, as they have been happy with the default values.

Visited Optional See Why Page

The survey was designed so that those who had input their values could look at the best fit results (Your Results) move immediately to exit the survey. For those who were curious how the best fits results were

calculated, they could choose to “look under the hood” and check out the See Why page which showed how the best fit results for each alternative were broke down in terms of principles. Eighty-five (85) survey takers took this invitation.

Daily Survey Response

#	Month	Day	Saw Your Neighborhood	Completed Your Neighborhood	Edited Values	Left Any Comments	Visited See Why
1	Aug	31	19	17	15	4	7
2	Sept	1	40	39	35	20	15
3	Sept	2	35	34	33	18	9
4	Sept	3	34	27	26	11	1
5	Sept	4	41	40	37	16	7
6	Sept	5	55	49	47	11	8
7	Sept	6	47	40	36	15	15
8	Sept	7	24	22	19	7	8
9	Sept	8	25	21	21	10	6
10	Sept	9	15	15	15	8	4
11	Sept	10	25	23	23	8	5
		Tot:	360	327	307	128	85

Table 8: Daily Survey Response

On Friday Sept 1st, 2006, WES mailed out cards inviting people to take the survey to 18,000 households that were ratepayers in Service District #1. It is likely that the first few days of the survey saw members of the public familiar with the CAC process taking the survey, accounting for the initial peak on Friday, September 1st. By Tuesday September 5th, the day after Labor Day, the number of people accessing the survey started to rise again, peaking at 55, and tailing off through the next weekend.

Geographic Description of Survey Takers

I am responding to this survey primarily as:

RespondingAs - Value	Frequency
A residential rate payer of CCSD#1	259
A business rate payer of CCSD#1	13
I am not a rate payer of CCSD#1	55

Table 9: Responding to this Survey Primarily as

Given that ninety six (96) people answer the following question that they are residents of the City of Milwaukie, and as such would be wholesale customers of the Kellogg plant, it is clear this question confused many people.

My residence is located inside the city limits of the:

WhereResident - Value	Frequency
Community of Boring	7
City of Damascus	5
City of Gladstone	8
City of Happy Valley	37

City of Johnson	2
City of Milwaukie	96
City of Portland(Clackamas County)	13
City of West Linn	5
Unincorporated Area of North Clackamas County	133
Not a resident of North Clackamas County	21

Table 10: My Residence is Located Inside the City Limits of

My residential zip code is

ResidenceZip - Value	Frequency
97015	32
97027	11
97034	3
97035	1
97045	4
97068	6
97086	46
97089	5
97222	102
97236	5
97266	4
97267	77
97269	1
Other	24
Not Resident	6

Table 11: My Residential Zip Code

Note: Specific zip codes for Happy Valley (97086) and Damascus (97089) were only added at 5PM on 8/31/06. These new zips were then assigned by the DBA to any one who had selected one of those cities prior to that.

My business is located inside the city limits of the:

WhereBusiness - Value	Frequency
Community of Boring	1
City of Damascus	2
City of Happy Valley	5
City of Johnson	2
City of Milwaukie	35
City of Portland(Clackamas County)	5
City of West Linn	1
Unincorporated Area of North Clackamas County	34
Not a business owner in North Clackamas County	242

Table 12: My Business is Located Inside the City Limits of

Clearly while over eighty five (85) of the respondents are business owners, and thirty four of these have their businesses in the Unincorporated Area of North Clackamas County, only thirteen of them declared

that they were answered the survey from the perspective of a business ratepayer in Service District #1. Again, this would suggest that the perspective question, which specifies ratepayers of Service District #1, was not well designed.

My Business zip code is

BusinessZip - Value	Frequency
97015	19
97027	2
97068	2
97086	5
97089	1
97222	39
97266	1
97267	18
Other	15
No Business Zip	225

Table 13: My Business Zip Code is

From here on, this report will use the geographic breakdown provided by the residence question (Table 10 above) to provide a geographic segmentation of the data..

Values Responses

In this part of the report, only those surveys where the Your Neighborhood section was completed (327) were included.

Values: Relative Importance of Principles

Principles/Importance Scale	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Local Control	40	97	104	52	34	28.8	327
Effects on District and Milwaukie Neighborhood	78	85	116	34	14	27.3	327
Cost to Ratepayers and New Home Builder in the District and Milwaukie	69	98	113	39	8	25.7	327
Effects on Other Jurisdictions	3	40	158	93	33	21.3	327
Mid-Term and Long Term Costs	56	110	140	16	5	22.0	327
Regional, Environmental and Economic Impacts	93	98	98	26	12	26.8	327

Table 14: Frequencies of Values - Relative Importance of Principles

The table headings along the top are the value items from the Importance Scale used in the Your Values pages of the survey, ranging from Not Important to Most Important. The rows in the table correspond to the principles in the model. The cells on the tables show how many of the 327 respondents selected the particular importance scale value for each Principle. For example, forty (40) survey takers declared that the principle of [Local Control] was Most Important to them when looking at this decision. On the other hand thirty-four (34) said [Local Control] was Not Important to them. It should be noted that the numbers in Table 14 reflect only the values placed on the principles by survey takers, and are not combined with the CAC Preliminary ratings in any way.

The next to last column “SDev” gives the standard deviation for the distribution when the Importance Scale is transformed to the quantitative scale [0, 25, 50, 75, 100] – see the section above “How are ratings used to calculate best fit results?” The SDev, or standard deviation, is an indication of how widely the survey takers views differed on the importance of each principle. For instance, there was a much wider range of opinion on the importance of the principle [Local Control] than there was on the importance of the principle [Effects on Other Jurisdictions].

To calculate any meaningful statistical measures for these frequencies of values tables, one needs to take into account the fact that from a decision perspective, declaring that all principles are Important, or that all principles are Most Important is to say the same thing – that all principles are equally important. This is taken care of by the normalization of values that was discussed in the section “How are ratings used to calculate best fit results?”

If we first normalize all the values, then take the average of the normalized values, we can calculate more meaningful averages and variances for these tables.

Normalized Average Values >>	Numeric	Verbal	SDev
Local Control	54	Important	27.9
Effects on the District and Milwaukee Neighborhoods	63.64	Very Important	26.0
Cost to Ratepayers and New Home Builder in the District and Milwaukee	63.76	Very Important	24.1
Effects on Other Jurisdictions	41.21	Important	20.7
Mid-Term and Long Term Costs	65.43	Very Important	20.7
Regional, Environmental and Economic Impacts	68.08	Very Important	26.6

Table 15: Average Normalized Values - Principles

On average, the survey takers considered all the principles to be Very Important, except for [Local Control] and [Effects on Other Jurisdictions] which values as Important only. Whereas the variance for [Local Control] is the largest, there is much more agreement on the value for the importance of the principle [Effects on Other Jurisdictions].

Values – Relative Importance of the Criteria for [Local Control]

Importance Scale >>	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
District Owns its Wastewater Treatment Plants	44	64	112	64	43	30.16	327
CAC has a Voice in Management and Implementation	40	77	143	33	34	27.53	327
District Meets Wastewater Capacity Needs w/in District	85	82	104	25	31	30.53	327

Table 16: Frequencies of Values – Relative Importance of the Criteria for [Local Control]

Normalized Average Values >>	Numeric	Verbal	SDev
District Owns its Wastewater Treatment Plants	48.71	Important	22.34
CAC has a Voice in Management and Implementation	54.88	Important	24.48
District Meets Wastewater Capacity Needs w/in District	63.46	Very Important	27.03

Table 17: Average Normalized values - [Local Control]

Values – Relative Importance of the Criteria for [Effects on District and Milwaukee Neighborhood]

Importance Scale >>	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Effects of Plant on Residences and Neighborhood	112	77	104	26	8	26.87	327
Short-term Impacts of Plant/Pipeline Construction	11	46	124	104	42	24.65	327

Table 18: Frequency of Values for [Effects on District and Milwaukee Neighborhood]

Normalized Average Values >>	Numeric	Verbal	SDev
Effects of Plant on Residences and Neighborhood	71.15	Very Important	20.19
Short-term Impacts of Plant/Pipeline Construction	39.48	Important	20.19

Table 19: Average Normalized Values - [Effects on District and Milwaukee Neighborhood]

This is a very strong statement that the public is willing to put up with short-term disruption and are more concerned about long-term impacts.

Values - Relative Importance of the Criteria for [Cost to Ratepayers and New Home Builder in District and Milwaukee]

Importance Scale >>	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Growth to be Paid for by Growth	109	104	96	14	4	23.74	327
Rates and Fees	60	74	149	37	7	24.59	327

Table 20: Frequency of Values for [Cost to Ratepayers and New Home Builder in District and Milwaukee]

Normalized Average Values >>	Numeric	Verbal	SDev
Growth to be Paid for by Growth	73.61	Very Important	15.42
Rates and Fees	60.26	Important	15.42

Table 21: Average Normalized Values for [Cost to Ratepayers and New Home Builder in District and Milwaukee]

Values – Relative Importance of Criteria of [Effects on Other Jurisdictions]

Importance Scale >>	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Effects of Plant on Residences and Neighborhood	60	102	123	29	13	25.41	327
Short-term Impacts of Plant/Pipeline Construction	6	30	143	108	40	22.16	327
Financial Impacts	52	85	147	36	7	23.86	327

Table 22: Frequency of Values for [Effects on Other Jurisdictions]

Normalized Average Values >>	Numeric	Verbal	SDev
Effects of Plant on Residences and Neighborhood	62.88	Very Important	22.21
Short-term Impacts of Plant/Pipeline Construction	37.41	Less Important	17.59
Financial Impacts	61.94	Important	22.43

Table 23: Average of Normalized Values for [Effects on Other Jurisdictions]

Once more, short-term disruptions are discounted.

Values – Relative Importance of [Mid-Term and Long-Term Costs]

Importance Scale >>	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Construction Costs	38	85	173	26	5	21.2	327
Lifecycle Costs	61	114	139	11	2	20.86	327
Planning Flexibility and Timing	18	82	183	40	4	19.31	327
Constructability	31	84	180	26	6	20.61	327
Economic Durability	53	117	133	19	5	21.99	327
Political Durability	18	38	148	79	44	25.44	327

Table 24: Frequency of Values - [Mid-Term and Long-Term Costs]

Normalized Average Values >>	Numeric	Verbal	SDev
Construction Costs	60.28	Important	19.32
Lifecycle Costs	67.33	Very Important	17.97
Planning Flexibility and Timing	55.14	Important	14.81
Constructability	58.11	Important	16.04
Economic Durability	64.53	Very Important	16.74
Political Durability	42.39	Important	23.43

Table 25: Average of Normalized Values for [Mid-Term and Long Term Costs]

Once more the public is focusing on the long-term – [Life Cycle Costs] and [Economic Durability]. The relatively high variance for [Political Durability] may indicate some confusion as to what it means and how it would be measured.

Values – Relative Importance of [Regional, Environmental and Economic Impacts]

Importance Scale >>	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Potential to Create an Environmental Benefit	88	92	121	22	4	24.3	327
Opportunity Costs	33	77	180	31	6	21.1	327

Table 26: Frequency of Values for Criteria of [Regional, Environmental and Economic Impacts]

Normalized Average Values >>	Numeric	Verbal	SDev
Potential to Create an Environmental Benefit	67.79	Very Important	15.01
Opportunity Costs	58.05	Important	15.01

Table 27: Average of Normalized Values of [Regional, Environmental and Economic Impacts]

What do these Value Frequency Tables Tell Us?

- A) All the principles introduced by the CAC were, on average, considered important by the survey takers, though 10% considered [Local Control] and [Effects on other Jurisdictions] to be Not Important. This is an important affirmative result in validating the overall decision framework, which is discussed in detail later.
- B) The only criteria to receive an average normalized value of less than 40% were [Short-term Impacts of Plant/Pipeline Construction], with respect to both the principles of [Effects on Other Jurisdictions] and [Effects on District and Milwaukie Neighborhood]. Throughout the survey, most survey takers felt that long-term issues outweighed immediate issues.
- C) The criteria that received the widest range of values were the three under [Local Control] as well as the criterion [Political Durability]. The formers' variance is likely due to very different opinions on the criteria, the latter is, based on some of the comments, a problem of understanding what is meant by political durability.

The Aggregate Values Survey

A useful way to summarize the values of the 327 surveys is to form an Aggregate Values survey, which is the survey whose values are the average normalized values recorded in Tables 15, 17, 19, 21, 23 and 27.

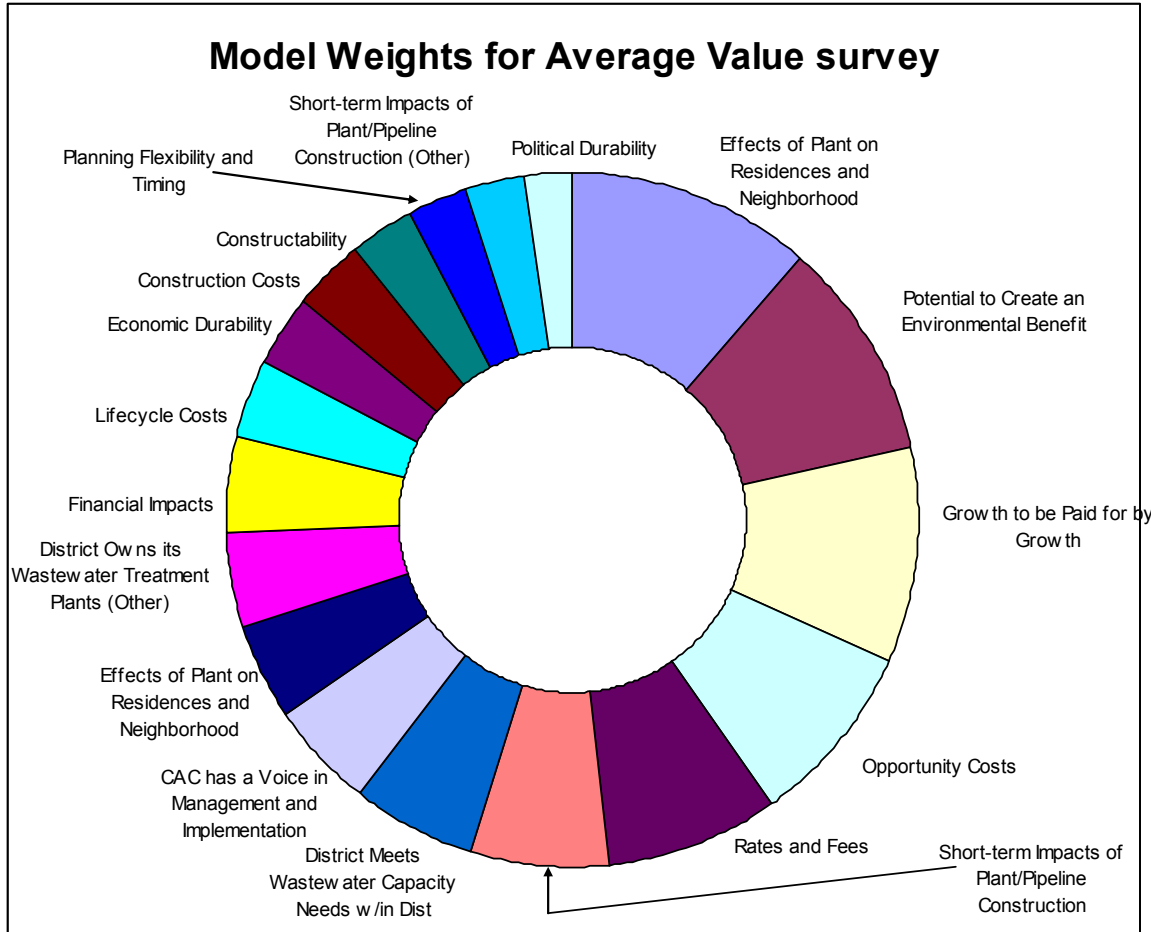


Figure 2: Model Weights for Aggregate Values Survey

These model weights are calculated directly from the public’s value frequency tables, and are independent of any ratings. They can be combined with the CAC Preliminary ratings in order to obtain the best fit based on those ratings, and the results of the calculation are shown in the figure below.

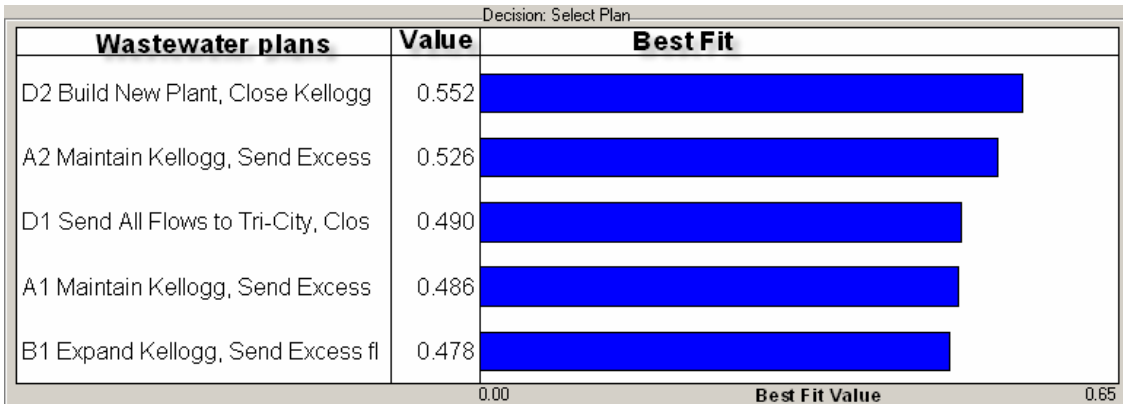


Figure 3: Best Fit for Aggregate Values Survey and CAC Preliminary Ratings

The Aggregate Values survey will be used frequently in the analysis sections to come.

Comments Statistics

Of the 327 survey takers that went beyond the Your Neighborhood page, 128 of them left on average 3.0 comments in their wake. There were open comment boxes the Principle Values page, on all six (6) Criteria Values pages, and one more opportunity on the Exit page.

Note: These numbers (387 comments from 128 survey takers) differ from those in the preliminary presentation because these final counts include three mailed-in survey responses and excluded empty responses.

Some survey takers took full advantage of all eight comment opportunities.

Number of Comments	Survey Takers
8	10
7	9
6	6
5	10
4	7
3	13
2	18
1	55
0	199

Table 28: Number of Comments per Survey

Comments Area	#Comments
Comments on Principles	78
Comments on Local Control	42
Comments on Effects on District and Milwaukie Neighborhood	46
Comments on Cost to Ratepayers and New Home Builder in District and Milwaukie	57
Comments on Effects on Other Jurisdictions	30
Comments on Mid-Term and Long Term Costs	30
Comments on Regional, Environmental and Economic Impacts	30
Comments from Exit page	74
Total Comments	387
Total Commenters	128
Total Respondents	327
Average for all Survey takers	1.2
Average per Commenter	3.0

The survey comments area had a limit of about two hundred words. Unfortunately, this limit was not communicated to survey takers and some comments were truncated on submittal. A full listing of all comments (with an index) can be found in Appendix A.

Comments on Discovery Survey Itself

The majority of comments contained opinions about aspects of the CCSD1 wastewater challenge, however some made reference to the survey itself. Survey-specific comments addressed the decision framework (i.e. principles and criteria) and related definitions (as spelled out in the survey's i-buttons), the process for making the public aware of the survey, as well as reaction to their best fit alternative. This section provides a complete listing of these comments. Survey takers' syntax remains as submitted.

Principles

cost to ratepayers and cost to home builders should be a separate question.

Don't lump new homebuilders and ratepayers into the same category. They're entirely different classes of folks. New homebuilders pay SDCs, keeping rates lower for existing ratepayers...so the cost impacts to these two groups (new homebuilders and existing ratepayers) vary depending on the treatment option that's selected.

Effects on District and Milwaukie Neighborhood

Don't lump "District" and "Milwaukie". Milwaukie is not within CCSD1; they've intentionally chosen the path of being a wholesale customer of the District's plant. They're two separate entities.

Mid-Term and Long Term Costs

Truthfully this line of questions delves deeper than most ratepayers can opine about such detail. Obviously all of these factors have to be weighed in devising a future approach to waste treatment and the appointed and elected decision

makers need to do this hard thinking on behalf of others..while also sharing their own opinions about these factors since they are more closely in tune with them

this part of the survey is ambiguous as mid term costs are one aspect and long term costs are mostly speculation.

These above criteria are among the most important of this survey!

These criteria are difficult to understand and to evaluate.

By "political durability" it's assumed that you mean perhaps the construction of a neighborhood after the site has been set up for a treatment plant? Or is this aimed at developers who decide they want a piece of property after the plant is built and want to have it moved for their own profits? This is unclear! If you are aiming for a shift in public perception, such as perhaps why the Kellogg site is "no longer acceptable", you might want to check with some of the folks who didn't want it sited where it is now, but were steam-rolled by the power structure of the day.

Regional, Environmental and Economic Impacts

Your "i" for Opportunity Costs uses the phrase to define itself...you never actually explain what the phrase means. I don't understand what your asking me to judge, so I'll leave it ranked at the middling, "important".

These issues should be secondary concerns, in my opinion. They should only be considered as "tiebreakers" if all else were equal.

This survey is stuck on this page and will not go further!!! [IH All this users values were recorded, so must have been a problem with Your Results page – unable to reproduce it]

opportunity costs is a bit confusing. If one is trying to site a new treatment plant I image the process in Oregon based on land use processes would take at least 8 to 10 years.

Most people do not know what "Opportunity costs" are. A better approach might have been to describe opportunities taken or missed, such as installing the pipeline at the same time the Trolley Trail is built. That's a huge opportunity benefit to the tune of several million dollars.

The information button isn't working, so I don't really know what Opportunity Costs are. Sorry.

Since it is very unclear what an "opportunity cost" really is it is very hard to have any opinion about it.

Exit Comments

Although the results of my survey did not indicate this, I would prefer to see them keep Kellogg Treatment plant open and have the overflow go to the Tri-City plant. I do not see a need to fix something that does not need fixing.

What I found interesting is that my values supported the construction of a new plant (not expanding Tri-cities)which is what I generally support. I would rather see a truly regional solution where everyone from Damascus to Tigard pays for on good large (highly techno)facility. But that means that EVERYONE between D and T must also pay (along with 50% against SDCs)to remove "old" stuff--whether it be a Lake Oswego plant or Kellogg plant and redirecting flows through new lines, including force mains. We haven't heard overtures from LO because they seem to have enough money to [Truncated on Submit]

I'm pleasantly surprised that my feelings about this issue were actually reflected in my survey results. From the questions, I had no idea how my responses would relate to the actual topic of which alternative was best. Maybe that's the sign of a well designed survey... Many of the principles/criteria baffled me as far as what you were really asking. I hope that I am a lone voice of discontent with the survey itself and that you get lots of "takers". People with loads of patience and LOTS of time on their hands, no doubt. Thanks for asking!

I do NOT agree with the final evaluation. I feel if this is the conclusion of my comments, then the evaluation is in error or my understanding of the survey is flawed. I am AGAINST closing Kellogg under any condition. The replacement consideration appears to more political than rational and economic. The question is why does Milwaukie deserve property to build a hotel or convention center at our expense?

I think the scoring method is rigged. If you read all of my previous comments, you'll see that I'm very skeptical of closing Kellogg, yet it somehow ranked at the top of my list!

I don't quite understand how my survey answers said that there are 42 and 47 % scores for closing Kellogg's plant. That question was not asked. For the record, I'm totally against closing the present plant.

It's nice that my opinion is being asked, here, but I thought we came to this decision a long time ago. I can't believe we're still discussing where to send our excrement. Send it someplace we can't see it -- like to Oregon City, if they want it! Can you IMAGINE what we could accomplish with all of the time, energy, and tax dollars being spent on your survey (& etc.), here, if we focused them on something else? Talk about waste ...

The graph is correct in that I would like to close Kellogg Creek and send the outflow to Tri-cities. I am not in favor of

This survey is slanted toward getting rid of the present plant. There is no A1 choice of keeping the present plant and under local control up dating it is need is seen.

As the norm, this survey is slanted to give results that the survey developers want, not what those taking the survey are really indicating

it is complicated survey... i dont understand those fancy terms.... it should be explained clearly and easy to read...

I assume that the postcards were sent to everyone in the district at some cost to the district. Yet when I looked for this survey, it was nearly impossible to find. I don't know if I could find it again if I had to. The cost of printing and sending these postcards for something that is apparently not important enough to be on the main web page was an absolute waste of my money, and I will keep that in mind during the next election.

As a citizen of Milwaukie, I am greatly upset about the shoddy and costly handling of the original Clearwater proposal: the underhanded scuttling of the costly project study, being left out of the CAC committee and finally, being denied even a voice in the mail in version. I have just completed this on line survey. It took me almost an hour of confusion to plow through it and I'm quite sure most citizens gave up long before the end.

I am chagrined that only CCSD1 retail customers were notified about this survey. As a resident of Milwaukie, a wholesale customer of the district, I should have as much say (since I pay my sewer bills, too) as the people who live within the district. The CAC really only serves retail ratepayers, and they are only about a third of the districts total customers. This is a sham.

The only weakness of this survey is this last page -- there should be an option to e-mail yourself the user ID. Few people are going to bother copying down such a long number! (IH: In response to this suggestion, the email option was added on September 2, 2006).

This survey process is very interesting. I would like the County to consider using it for other larger issues, so that citizens can have a more active role in decision making. The Information button isn't working at the moment, for your information. Thursday, 4:40 PM.

To me this survey looks slanted. I didn't see all the questions that in some way concluded what you say I said. When we voted on this last year or whenever, the people voted it down. We concluded that the two treatment plants had recently been brought up to speed and that they were fine and could handle our needs now and in the future. We spent a lot of money to refurbish them and that would all go to waste. We also concluded that there was about 6 mil. in reserves and that would maintain the systems for 15 to 20 years. We voted to leave things alone. Why is it that now someone wants to bring [Truncated on Submit]

What BS is this? My opinion is just the opposite. Read previous comments, Leave Kellogg open!!!

Summary of Comments Regarding the Survey Itself

<i>Comment Type</i>	<i>Number of Comments</i>	<i>InfoHarvest Response</i>
<i>Survey rigged to remove Kellogg</i>	3	CAC preliminary ratings slightly favor D2 when all values equal – hardly a direction CAC would choose
<i>Explanations unclear/confusing</i>	9	This was a major problem – time constraints and CAC process precluded needed clarifications
<i>Too complicated/ too long</i>	2	The CAC is facing a complex decision
<i>Restricted distribution/hard to find</i>	2	Hard for WES to mail non-direct customers. Also the mailers were sent out before WES new actual URL.
<i>Disagree with best fit alternative</i>	5	The decision is to choose one of the five wastewater plans, and keeping/removing Kellogg alone is not a solution. A better description of what is meant by “Best Fit” might have been helpful here.
<i>Technical issues</i>	3	On some browsers, some pop-up blocking programs can stop the Notes Info screens from appearing when the i-buttons are clicked.

Table 29: Comments on Survey - Breakdown by Type

Preferred Alternatives Based on Comments

Looking through all the comments (See Appendix A), we extracted the following table that looks at all comments that indicate that the commentator has a predetermined outcome in mind.

	<i>A2- Keep Kellogg, New Plant</i>	<i>B1- Expand Kellogg, excess to Tri-City</i>	<i>D1- Close Kellogg, all flows to Tri-City</i>	<i>Decommission Kellogg</i>	<i>Keep Kellogg</i>
<i>City of Boring</i>				1	
<i>City of Damascus</i>					
<i>City of Gladstone</i>					
<i>City of Happy Valley</i>				1	2
<i>City of Johnson</i>					
<i>City of Milwaukie</i>			8	17	5
<i>City of Portland (Clackamas County)</i>				2	
<i>City of West Linn</i>					
<i>Unincorporated Area of North Clackamas County **</i>	2	2	2	3	6
<i>Not a resident of North Clackamas County</i>				2	

***Two residents of the Unincorporated Area of North Clackamas County suggested that some other alternative should be considered.*

Table 30: Preferred Outcome broke down by Residence

There were 25 comments from the 96 survey takers resident in Milwaukie that pointed to solutions that involved removing Kellogg, with five (5) comments arguing for Kellogg to be kept. Ten (10) of those from the Unincorporated Area of North Clackamas County wanted solutions (A2, B1) that keep Kellogg, whereas five (5) expressed their feeling that Kellogg should go.

Geographic Segmentation

This, and conversation with the CAC and WES staff, suggest that three useful geographic groups to use for further analysis are:

North Clackamas District (179 out of 327)

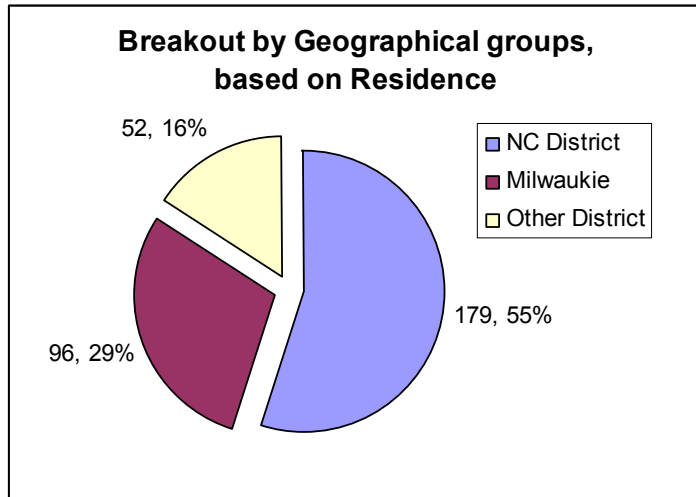
= City of Happy Valley, City of Johnson, Community of Boring, and the Unincorporated Area of North Clackamas County

City of Milwaukie (96 out of 327)

= City of Milwaukie

Other Districts (52 out of 327)

= City of Damascus, City of Gladstone, City of Portland (Clackamas County), City of West Linn and "Not a resident of North Clackamas County"



Response Analysis

In this section, we make use of the best fit calculations and the geographic breakdown from the last section to investigate the validity of the CAC decision framework.

Please note that all the data used so far (values and comments) has been that provided by the public through the discovery survey. From here on we will be combining the values data from the public with CAC's Preliminary ratings.

Validating a Decision Framework

In Multi-Criteria Decision Analysis (MCDA), there are three key properties a decision framework must have to be useful in helping in a winner-take-all decision with many stakeholders.

- A) Comprehensiveness – Does the decision framework take into account all the major criteria that might help discriminate between alternatives?
- B) Power of Discrimination - Can it discriminate between predefined alternatives?
- C) Signal Transmission - If a sub group of survey takers can be found that have a strongly preferred outcome, and one or more alternatives is a viable alternative with the properties they want, will the decision framework recognize those alternatives as best fits?

The discovery survey and the public's responses (values and comments) allow us to investigate all three.

Comprehensiveness

The survey takers were encouraged to note anything that came to mind as they studied the list of guiding principles and their associated criteria.

In fact there was only one principle that was consistently mentioned in comments, and which we missed in the preliminary report. And that is Regionalism – giving value to solutions that work at a regional level. We missed it because we saw it as the flip side of [Local Control], but feedback from the CAC Communication meeting on Sept 12th, 2006 made us realize that there is significant interest in creating a regional solution regardless of how control is exercised. When we re-examined the comments in Appendix A, there were fifteen (15) comments that were not necessarily about disparaging the principle of [Local Control], but rather their authors wanted to see alternatives that provided for regional solutions given credit for that. This would be worth adding to the decision framework, though much thought is required to unravel the interconnections between [Local Control], [Effects on other Jurisdictions] and this new regional principle/criteria.

For a problem as complex as this wastewater challenge, to have only one principle not fully or adequately represented, is a significant accomplishment for the CAC and those working with them.

Power of Discrimination

The ability of the framework to discriminate between alternatives based on the criteria and their measures, all depends on the ratings produced. If the ratings across alternatives are so similar that all the alternatives produce similar best fits scores with similar drivers, it usually means that the criteria are so vague and the alternatives sufficiently similar that no true differences are being registered. This phenomenon is better illustrated with reference to the following figure.

Contributions to Select Plan from Level:Criteria

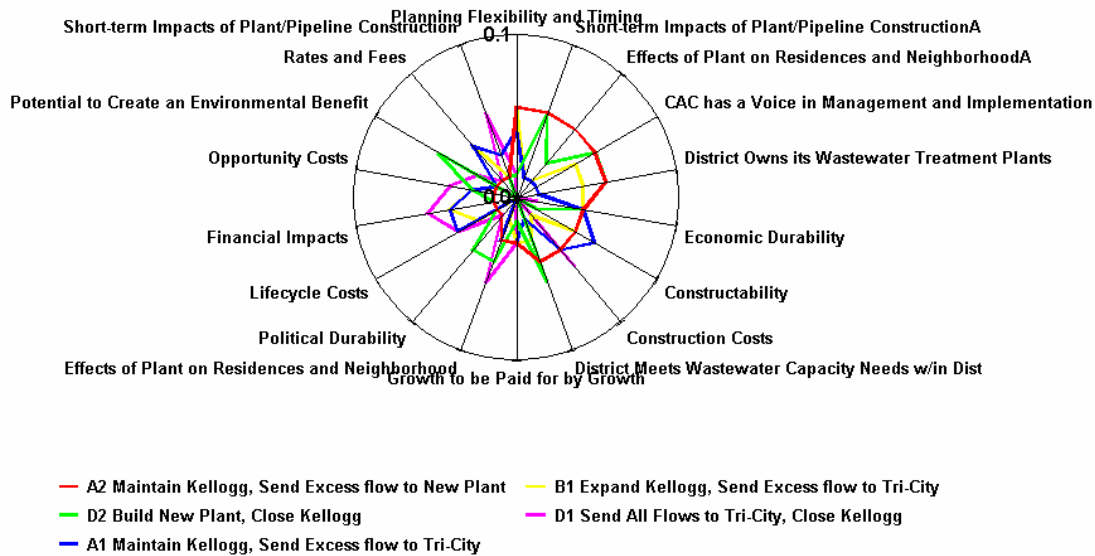


Figure 4: Radar Chart of Normalized Ratings of Criteria

The radar chart above shows the normalized ratings for all five alternatives against all criteria. The eighteen (18) criteria provide the 18 axes you see in the figure. Each alternative is a colored band, with its distance along each criteria axis indicating how well it rates against that criterion. For example, A2 (in red) has very high ratings in a host of criteria from [Planning Flexibility and Timing] clockwise around to [Construction Costs], but it rates very poorly on criteria such as [Opportunity Costs] and [Political Durability].

If the model had no power of discrimination, you would see one of two visual patterns.

- All or some of the alternatives with a band of very similar shape around all the criteria. No matter how a stakeholder would rate the model, those alternatives with always have a similar fit to the stakeholders values.
- That one alternative, called the dominant alternative completely encloses one or more of the others. That means that no matter how a stakeholder would value the various criteria, that dominant alternative, scoring highest on all criteria axes, would always be the best fit. If you trace any of the five bands in the figure above, you will see none dominate any of the others, let alone all of them.

In fact, as we mentioned for the Default Survey (all principles being equal, and all their associated criteria being values equally also) the best fit breakdown looks like:

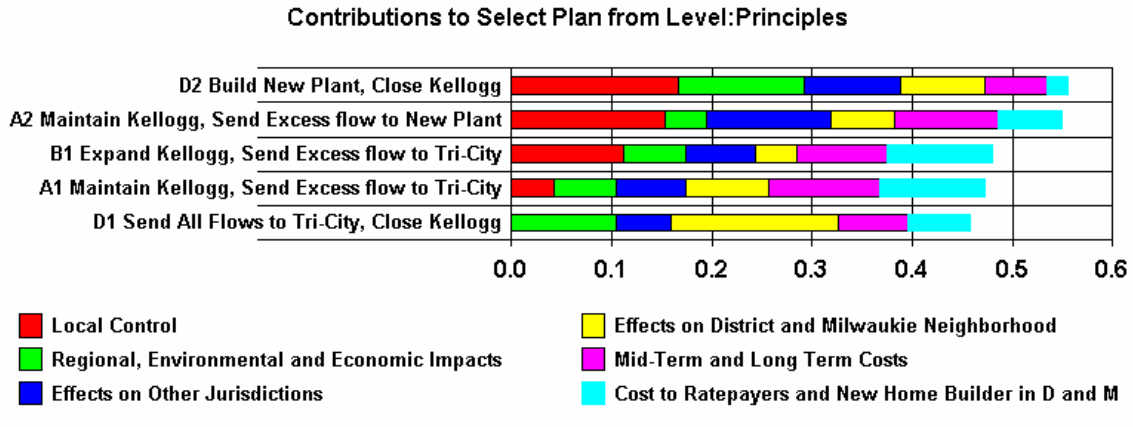


Figure 5: Breakout of Best Fit Calculation for Default Survey

As was noted in the section “How are Ratings Used to Calculate Best Fit Results” the CAC’s Preliminary ratings provide D2 with a slight advantage for the Default Survey, with A2 possessing with a very similar fit score, but for very different reasons, as can be seen for the above figure.

Transmits Values

From their comments regarding preferred outcomes, and the history and location of the Kellogg plant, it is a reasonable hypothesis that many of the survey takers resident in Milwaukie would likely chose D1 or D2 as both of these plans involve the removal of the Kellogg treatment plant. Conversely, since many in the Unincorporated Area do not want to see Kellogg closed (though many from the same area do), we expect to see a weaker fit with solutions such as D1 and D2. We test this hypothesis using Best Fit matrices.

Best Fit Matrices

When a large population of stakeholders has separately input their values, one way to summarize the fit of the alternatives to each individual’s values is in a Best Fit matrix. This matrix or table shows for how many survey takers each alternative was calculated to be the best fit to their values, for how many it was the 2nd best fit and so on.

Table 31 and subsequent similar tables use the A1, A2, B1, D1 and D2 designation for the alternatives.

- A1 Maintain Kellogg, Send Excess flow to Tri-City**
- A2 Maintain Kellogg, Send Excess flow to New Plant**
- B1 Expand Kellogg, Send Excess flow to Tri-City**
- D1 Send All Flows to Tri-City, Close Kellogg**
- D2 Build New Plant, Close Kellogg**

The Best Fit matrix for all the 327 surveys included for analysis is below.

Best Fit [327]	A1	A2	B1	D1	D2	A1 (%)	A2 (%)	B1 (%)	D1 (%)	D2 (%)
Best	19	65	6	46	191	6%	20%	2%	14%	58%
2nd Best	43	150	25	54	55	13%	46%	8%	17%	17%
3rd Best	45	61	129	58	34	14%	19%	39%	18%	10%
4th Best	184	39	48	26	30	56%	12%	15%	8%	9%
5th Best	36	12	119	143	17	11%	4%	36%	44%	5%

Table 31: Best Fit Matrix for all 327 Surveys, with %

For example, nineteen (19) survey takers would, on reaching the Your Results page, have seen that A1 was calculated to be the Best Fit to their individual values. This calculation is based on their own values that they entered in the survey, and the CAC Preliminary ratings in use.

With the CAC's Preliminary ratings and the values from the survey, all the alternatives did appear as a best fit for some one. That it was possible that each alternative might be the best fit for someone we knew from the analysis in the section "Power of Discrimination" above. What the Best Fit matrix shows is that the range of values amongst the survey takers is in fact broad so that each of these plans fits the values of at least of the survey takers.

This survey is not a voting process. The Best Fit matrix above shows how well the alternatives, using the current, preliminary ratings of the CAC, fit the values of those who took the survey.

Within that population of 327, D2 would have shown up most often as the best fit for 191 (58%) of surveys takers, A2 65 (20%), D1 46 (14%), with A1 and B1 below 10%.

With the CAC's Preliminary ratings based entirely on the qualitative scale [--, -, 0, +, ++] and with expert evaluation on a majority of the criteria unavailable at the time of the survey, these numbers can be expected to change significantly. But they are encouraging that the decision framework is sensitive to different inputs, which we will confirm in the next section.

An important datum from the Best Fit Survey is that D2 shows up as either the best or next best fit for 75% of the surveys, and A2 for 66% of the surveys. After that, D1 trails far behind with 31% of the surveys. When such an overlap of the top two best fitting alternatives occurs, it often suggests that there may be a way to generate a new alternative from the disparate pair that might fit more peoples' values than either one alone could. We'll return to this in the Ways Forward section below.

Values Broken Down by Geography

Here we use the geographic segmentation developed in the Survey Response section to show that the values of the Milwaukie group vary significantly from that of the District group, and that the decision framework does indeed transmit these difference through to the Best Fit results.

Principles/Importance Scale	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Local Control	7	20	35	22	12	27.54	96
Effects on District and Milwaukie Neighborhood	53	28	13	0	2	21.64	96
Cost to Ratepayers and New Home Builder in D and M	9	32	38	14	3	23.47	96
Effects on Other Jurisdictions	1	17	49	22	7	21.04	96
Mid-Term and Long Term Costs	12	24	53	5	2	21.22	96
Regional, Environmental and Economic Impacts	29	37	23	3	4	25.32	96

Table 32: Frequency of Values for Survey Takers Resident in Milwaukie

Principles/Importance Scale	Most Important	Very Important	Important	Less Important	Not Important	SDev	Total
Local Control	28	65	50	23	13	27.91	179
Effects on District and Milwaukie Neighborhood	17	44	76	31	11	25.31	179
Cost to Ratepayers and New Home Builder in the District and Milwaukie	57	54	44	21	3	26.68	179
Effects on Other Jurisdictions	2	16	83	56	22	21.49	179
Mid-Term and Long Term Costs	40	64	63	10	2	22.7	179
Regional, Environmental and Economic Impacts	49	48	54	20	8	28.24	179

Table 33: Frequency of Values for Survey Takers Resident in the District

Calculating the average normalized values from the above two tables, we combine them into a single table for comparison.

Normalized Average values >>	Milwaukie		NC District	
	Numeric	Verbal	Numeric	Verbal
Local Control	46.87	Important	59.52	Important
Effects on District and Milwaukie Neighborhood	84.7	Very Important	53.34	Important
Cost to Ratepayers and New Home Builder in the District and Milwaukie	57.2	Important	69.9	Very Important
Effects on Other Jurisdictions	45.98	Important	38.18	Important
Mid-Term and Long Term Costs	60.37	Important	68.62	Very Important
Regional, Environmental and Economic Impacts	71.03	Very Important	66.03	Very Important

Table 34: Average Normalized Values by Geography

Representing these graphically, it is clear to see the similarities and differences between the two groups. Both group consider the principle of to [Regional, Environmental and Economic Impacts], to be very important. Neither group emphasizes the [Effects on Other Jurisdictions].

But while those residing in Milwaukie place great importance on the [Effects on District and Milwaukie Neighborhood], those from the District emphasize the cost related principles.

While [Local Control] is considered somewhat more important by those in the District, the disparity here is much smaller than that for [Effects on District and Milwaukie Neighborhood].

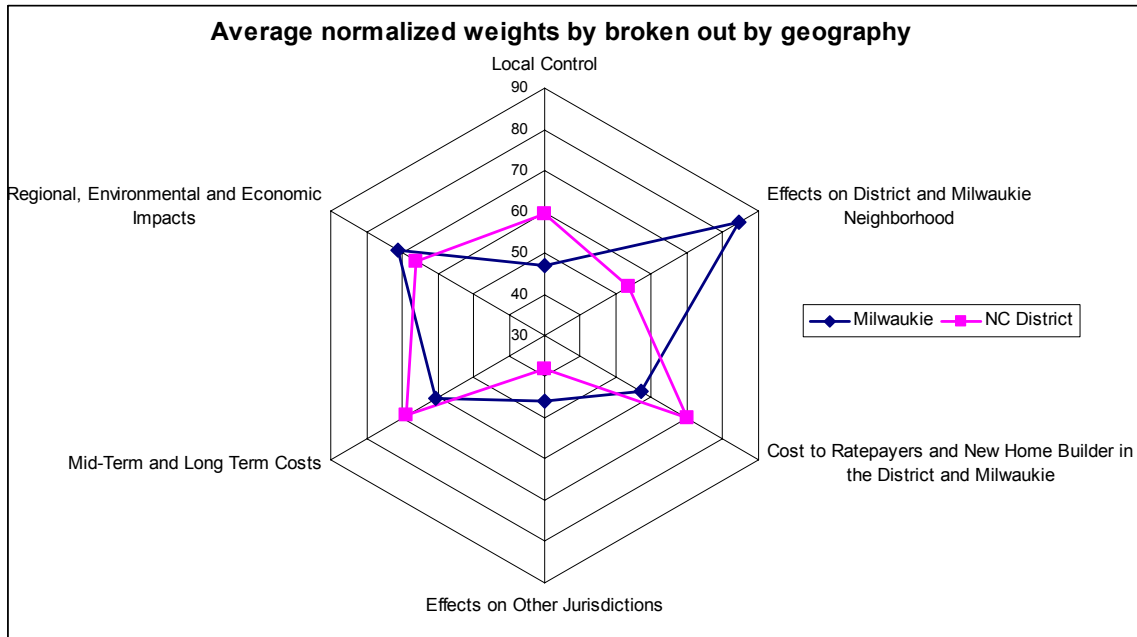


Figure 6: Average Normalized values for Milwaukie and NC District

Best Fits Broken out by Geography

Given that the values of the two groups are significantly different, does the decision framework transmit those values? Since D1 and D2 both involve removing Kellogg and freeing up Milwaukie waterfront, one would expect to see these alternatives to fit the Milwaukie’s group’s values more than those resident in the district.

Best Fit [96]	A1	A2	B1	D1	D2	A1 (%)	A2 (%)	B1 (%)	D1 (%)	D2 (%)
Best	1	8	0	20	67	1%	8%	0%	21%	70%
2nd Best	16	40	1	27	12	17%	42%	1%	28%	13%
3rd Best	11	34	19	25	7	11%	35%	20%	26%	7%
4th Best	57	13	12	7	7	59%	14%	13%	7%	7%
5th Best	11	1	64	17	3	11%	1%	67%	18%	3%

Table 35: Best Fit Matrix for the 96 Milwaukie Residents

Best Fit [179]	A1	A2	B1	D1	D2	A1 (%)	A2 (%)	B1 (%)	D1 (%)	D2 (%)
Best	17	50	5	14	93	9%	28%	3%	8%	52%
2nd Best	17	83	24	22	33	9%	46%	13%	12%	18%
3rd Best	28	18	88	24	21	16%	10%	49%	13%	12%
4th Best	100	19	28	13	19	56%	11%	16%	7%	11%
5th Best	17	9	34	106	13	9%	5%	19%	59%	7%

Table 36: Best Fit Matrix for the 179 NC District Residents

For easy comparison, we assemble the Best Fit results for all three geographic groups.

Geo Group	A1	A2	B1	D1	D2	A1 (%)	A2 (%)	B1 (%)	D1 (%)	D2 (%)
NC District	17	50	5	14	93	9%	28%	3%	8%	52%
Milwaukie	1	8	0	20	67	1%	8%	0%	21%	70%
Other Districts	1	7	1	12	31	2%	13%	2%	23%	60%

Table 37: Comparison of Best Fit Results for the Three Populations

Sure enough, D1 and D2 were calculated to be the best fit for 91% of the survey takers from the Milwaukie group, but they accounted for only 60% for the survey takers from the District. Conversely, while A2 was the best fit for 28% of survey takers from the District, it was calculated to be the best fit for only 8% of those from Milwaukie.

Conclusions about the Decision Framework

So while the decision framework suffers somewhat from vagueness in its wording of principles and criteria, a group with a distinct set of values that favors particular alternatives will see those values result in the outcome they would expect. While new ratings may change the outcomes significantly, and biased ratings could render the decision framework valueless, the structure of the decision framework is valid for the purpose for which it was intended.

Looking Forward

A Hybrid Alternative

As mentioned in the report, Best Fit matrices are useful in discovering different alternatives that might be a good fit to the same individual, and which alternatives if combined carefully might produce a better fit than the current alternatives.

A case in point is A2 for the 96 people who identified themselves as resident in Milwaukie. From Table 36 it appears that for half of these Milwaukie dwelling survey takers, A2 would have been the best (8) or next best (40) fit. Within the NC District group, 70% would have D2 as best or next best fit, and 74% A2. If one looks at the Contributions Analysis based on the Aggregate Values for the Milwaukie group it may be less surprising than it appears:

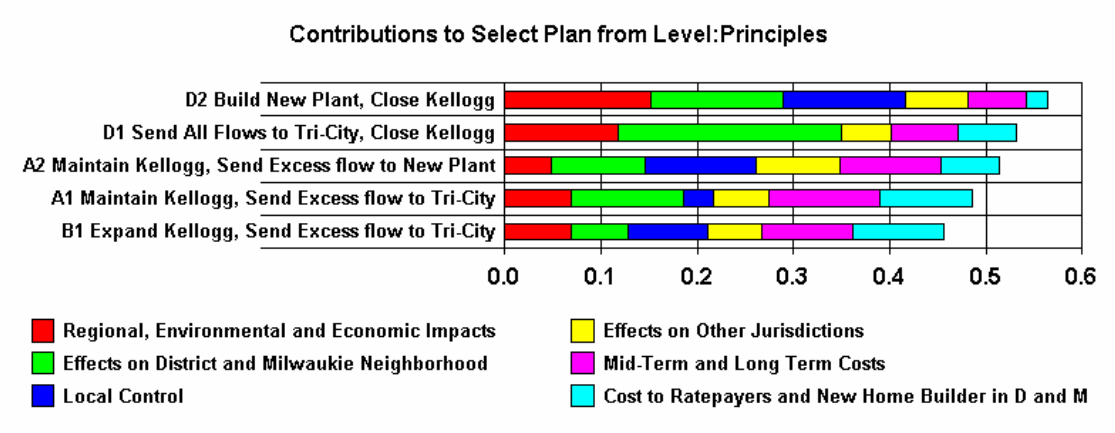


Figure 7: Contributions for Aggregate Value Survey for Milwaukie Group

Residents of Milwaukie also value [Mid-Term and Long Term Costs] and [Cost to Ratepayers and New Home Builders in the District and Milwaukie], where A2 performs better than D2.

This suggests that if a solution were developed that has the advantages of A2 combined with the advantages of D2, the resulting solution might be a better fit for the people of Milwaukie's values than either of the

current ones do. [We don't consider D1 on account of its combined best + next best % in NC District being only 20%.]

At first glance A2 and D2 may seem diametrically opposed, at least for the Milwaukie group, but time is a consideration. In neither solution does Kellogg disappear immediately, since building a brand new plant takes time. A more acceptable solution might be one in which Kellogg is kept going for some years to reduce the risk in moving all wastewater to the new plant, but once that new plant is running and tested, Kellogg would at last be phased out.

To which Values is the Best Fit Most Sensitive?

If a survey taker were to acquire more information about the wastewater planning decision, they might change some of their values. While there are 24 different values being used in the model, only a few will drive which alternative is the best fit. Knowing which values are driving a model gives insight into which of the public's values, if changed, will most likely alter the best fit. This is called Criticality.

Recall that for the Aggregate Values survey, D2 is the best fit, followed by A2. Using the average normalized weights for all 327 survey takers, we calculate a Criticality quantity for every importance value in the model.

Principle	Criticality	Current Value	Crossover Value	New Best Fit
Regional, Environmental and Economic Impacts	4%	Very Important	Important	A2
Local Control	6%	Important	Less Important	D1
Mid-Term and Long Term Costs	7%	Very Important	Most Important	A2

Table 38: Values to which Best Fit is most sensitive based on CAC Preliminary ratings and Aggregate Value survey

The smaller the size of the Criticality parameter for a criterion, the more sensitive the outcome of the model is to changes in the importance of that criterion. In the above table, a change of the current average value of the importance of the principle [Regional, Environmental and Economic Impacts] from Very Important down to Important would result in A2 becoming the best fit for *this average model*. On the other hand, a change in the average normalized importance of [Local Control] from Important to Less Important would have D1 become the best fit rather than the current best fit, D2.

To which Rating is the Best Fit Most Sensitive?

Obtaining more accurate ratings values takes time, money and expertise. When decision makers are budgeting time and resources to obtain better ratings, knowing which ratings are most likely to effect the best fit can help focus resources and people power on the most necessary research.

For a decision framework where all the criteria use the same ratings scale (--, -, 0, +, ++), the model weights (defined in the section “How are Ratings used to calculate Best Fit Results”) for a survey taker directly determine the sensitivity of the best fit to the ratings. The higher the model weight of a criterion, the more sensitive the best fit will be to a change in those ratings.

Using the Aggregate Values survey once more, the average normalized model weights are give in Table 40, in decreasing size.

Criteria	Model Weights
Effects of Plant on Residences and Neighborhood	0.12
Potential to Create an Environmental Benefit	0.10
Growth to be Paid for by Growth	0.10
Opportunity Costs	0.09
Rates and Fees	0.08
Short-term Impacts of Plant/Pipeline Construction	0.06
District Meets Wastewater Capacity Needs w/in Dist	0.06
CAC has a Voice in Management and Implementation	0.05
Effects of Plant on Residences and Neighborhood	0.05
District Owns its Wastewater Treatment Plants (Other)	0.04
Financial Impacts	0.04
Lifecycle Costs	0.04
Economic Durability	0.03
Construction Costs	0.03
Constructability	0.03
Planning Flexibility and Timing	0.03
Short-term Impacts of Plant/Pipeline Construction (Other)	0.03
Political Durability	0.02
Total	1.00

Table 39: Model Weights of Criteria for Aggregate Values Survey

Recall that with the current CAC Preliminary ratings, the best fit for both the Default and Aggregate Value surveys is D2. The effect that unit changes of ratings for A2 for the top three criteria (from Table 40) have on the Best Fit matrices is shown in Table 41 below.

Top three Criteria with highest model weights	Model Weight	Current Rating A2	Change d Rating A2	Change				
				A1	A2	B1	D1	D2
Best Fit based on Current CAC Preliminary Ratings >>>>				19	65	6	46	191
Effects of Plant on Residences and Neighborhood	0.12	0	+	15	140	6	41	125
		0	-	27	34	8	46	212
Potential to Create an Environmental Benefit	0.10	-	0	17	138	2	44	126
		-	--	24	38	8	46	211
Growth to be Paid for by Growth	0.10	0	+	12	142	0	44	129
		0	-	28	22	16	46	215

Political Durability	0.02	-	0	18	93	6	45	165
		-	--	21	58	7	46	195

Table 40: Effect Single Changes in Selected Ratings for A2 has on Best Fit Matrices

Numbers in red indicate a decrease compared to the best fit numbers based on the CAC Preliminary ratings (top row). Increasing the rating for A2 by one increment for any of the criteria with the three highest model weights would result in best fit matrices in which A2 would be the best fit for most surveys. In contrast, a unit change in the rating of A2 for [Political Durability] has considerably less impact on the best fit numbers. It might be best to concentrate future efforts on obtaining better ratings for those criteria with the highest model weights in the Aggregate Values survey. Note that the model weights for the Aggregate model are calculated directly from the public’s values and are independent of the ratings used.

Summary

The Citizen Advisory Council has created a decision framework to help them arrive at a recommendation for one of the five wastewater treatment plans that have been developed in conjunction with the public and WES. When the decision framework was published on the web, 327 survey takers took the time to answer all the questions on values and provided many insightful comments. The values provided indicate a broad range of values amongst the public in the District, the City of Milwaukie and beyond. By providing feedback to the public in terms of which alternatives best fit their values, the discovery survey elicited strong reactions and feedback.

Based on the public’s values we have analyzed the decision framework and find it to be a comprehensive, valid decision structure capable of matching any one of the alternatives to the values of the user. It was demonstrated that those survey takers resident in the District have significantly different values than those in the City of Milwaukie, and that the decision structure transmits such differences. Based on the CAC’s Preliminary ratings and the public’s individual values, the alternative D2 was calculated to be the best fit for most survey takers, with A2 being the next best fit. These outcomes are entirely dependent on the CAC’s ratings, which at the time the survey was launched, were preliminary and based on a qualitative scale for all criteria, with expert estimates for technical criteria expected any day.

Ways Forward

If the CAC, WES or the BCC were to continue to make use of this decision framework, then the main task is to replace as many of the preliminary ratings with more accurate ratings, if and when demonstrably more accurate ratings are available. Such ratings may come from hired experts, from WES staff, or insights from the CAC members themselves. The analysis performed in this report on which ratings are most likely to effect the best fit gives some suggestion as to which criterion’s ratings should be prioritized.

If the ways in which new ratings are superior to CAC’s preliminary ratings is well documented, then there would be considerable value in reopening the survey and inviting those who had taken it with the preliminary ratings in place to come and review the effects of the newer ratings. Where qualitative scales are replaced by quantitative scales with recognizable units, some of the tradeoffs will become visible and may prompt some of the public to rethink their values and provide fresh feedback.

Appendices

Appendix A: Capture of Comments from the CCWES Wastewater Discovery Survey

Appendix B: Text for Principles and Criteria Used in the Discovery Survey

Appendix C: Screenshots of the Online Survey

Appendix A: Capture of Comments from the CCWES Wastewater Discovery Survey

Capture Summary

This document contains all the comments received by September 11, 2006, including written survey comments. This document is Appendix A of the final report. While syntax has been left unchanged, gross spelling errors have been corrected and any identifying information, such as names of survey takers, has been deleted. There were a total of 387 comments from 128 survey takers.

Table of Contents

Comments on Principles (78 comments)

Comments on Criteria for each Principle:

Local Control (42)

Effects on District and Milwaukie Neighborhood (46)

Cost to Ratepayers and New Home Builders in the District and Milwaukie (57)

Effects on Other Jurisdictions (30)

Mid-Term and Long-Term Costs (30)

Regional, Environmental and Economic Impacts (30)

Exit Comments (74)

Index

Principles

1. Long term environmental sustainability is key to our society maintaining its standard of living. Other than global warming, the most important resource to society is drinking water. Without it we can meet our fundamental requirements for living (drinking, making food, sanitation and industry). Without clean water we will not be able to sustain animal life as we know it today, especially fish.
2. Even with the "i" explanation, the "Effects on Other Jurisdictions" principle leaves me wondering "what are you really getting at...how the future of our wastewater treatment affects Canby, Molalla, Estacada?" Honestly, these "principles" are vague enough so as to be virtually impossible to weigh with any degree of certainty.
3. New home builders in the district should pay the costs to join the community as we did. They should also pay the additional education costs. The better solution would be for this group to form their own district to ensure they pay all of the costs. These new areas believe them selves superior to the rest of us, so let them "foot" the bill.
4. Since Milwaukie would be the primary beneficiary of closing the Kellogg plant, the city should pay at least half the cost of its removal and replacement. (40% based solely on its share of flow contribution, and another 10% for its added benefit in redeveloping the Willamette waterfront.) I don't agree with the assumption that Kellogg will inevitably lose roughly half of its capacity due to the new ammonia limit, which should be successfully appealed. Finally, I believe CCSD #1 should become a sanitary authority or special (ORS 450) service district. The Board of County Commissioners
5. New annexations or new construction should not be subsidized by the existing customer base. Regional impacts? I don't get the question. if our plant meets water discharge standard, how does it have an economic impact on the region?

6. We need to plan for the future needs of our communities. It makes sense for our communities to work together on this project, share resources, and save money and land. The Milwaukie riverfront is really not the best location for a sewage treatment plant in 2006. I would like to have it relocated to another place and at the same time have the new facility built to the highest environmental standards possible.
7. Please consider the value of a regional wastewater treatment alternative that frees up the Kellogg site for other public benefit.
8. Effects on the riverfront are the most important consideration. The decisions made today will drive the livability of this area for decades. Fish habitat should be paramount.
9. A new wastewater treatment plan should be built in a location that fairly accommodates the county's waste processing needs, in proportion to where the bulk of new building and development has occurred. Milwaukie should not absorb the impact of happy valley, damscus and boring growth. Nor should it have to host the county's treatment site any longer...its time to move beyond an outdated facility and locate a new one in a place that does not decimate a community's riverfront.
10. Upgrading this facility at its current location would be more expensive in the long term than building a new one at a different location to serve the ever-growing population. The current wastewater treatment plant is located on property that will not increase in value and citizen involvement as rapidly with it in place as it would if it was located elsewhere and a citizen friendly plan was implemented on that property.
11. It's time to move the plant and free the Milwaukie water front of it's negative effects
12. Please move that beast and put that beautiful waterfront property to a better use!
13. The Milwaukie Riverfront is a potential treasure and the sewage treatment plant MUST be moved. This will have positive benefits for revitalization the downtown Milwaukie area and beyond.
14. We need to protect natural habitat, and maximize value of waterfront and downtown Milwaukie.
15. We need to get the wastewater treatment plant out of our waterfront park. It makes the whole neighborhood stink and is an embarrassing eyesore at a time when Milwaukie is working to improve its waterfront and downtown --which will boost local economy! Our community is growing rapidly and citizens are willing to pay for expansion of the services we need--including wastewater treatment.
16. Environmental impact is very important to me.
17. The district needs to look to the future needs of not only the local citizens but to the health and treatment needs of the extended metro/county area population. The costs of ungrading the treatment facilities should not be borne by current ratepayers only. The builders will keep building and jobs will continue to blossom in Clackamas county if the infrastructure is there to support the pending needs. Much of the cost of expansion could be blunted if the fees for new construction were bumped to accommodate the increased demand for services.

18. Milwaukie is the gateway to Clackamas County from the north both by road and water. The riverfront area in Milwaukie is one of the few remaining nice spots on the river that allows access for the public to the water. The presence of a sewage treatment plants thwarts redevelopment in Milwaukie and it may likely continue its downward spiral that it has been on for the last 10 years of becoming the low income transient portion of Portland Metro. Is that what Clackamas County wants for its gateway community? I like to think our current County commissioners have more foresight than the ones tha [Truncated on Submit]
19. The cost to the rate payers is my number one concern. I also believe it is extremely important to get rid of the existing plant for a lot of reasons: smells, is ugly, occupying space that could have a much higher use and value. The water front would then represent the gateway to Clackamas County that we all could be proud of and it also makes the most sense from an economic point of view.
20. As a business owner, I have high hopes that the obvious wisdom to close the sewage plant that occupies the most expensive real estate in Milwaukie will happen sooner than later. I don't think Milwaukie has much of a draw without developing this beautiful property. It's something we could all be proud of, not to mention make a lot of money from.....the crowds are always looking for the new spot, and since there no great places to have dinner overlooking the river anywhere.....it's a "no brainer".....boutiques, restaurants, etc. etc. etc. drawing people with taste and money
21. We need to move the treatment plant from downtown Milwaukie. This is a major inhibitor to development of the Milwaukie area. I am ready to pay higher charges to attain this goal.
22. The sewage treatment plant should be removed from the Milwaukie waterfront.
23. Kellogg Sewage Plant has a negative impact on the environment and an economic impact on the City. Improvement costs to upgrade the Kellogg plant to Federal regs coupled with all impacts on The City of Milwaukie growth and financial gain from growth does not make for sound judgment.
24. I hope that we can be part of a unified district that will build a sewer line from Milwaukie to Oregon City so we can decommission the Kellogg Creek plant. Costs are going to increase whichever solution is chosen.
25. We live in Milwaukie but most of our riverfront is taken by the sewage treatment plant. It is my understanding that other places in Clackamas County such as Happy Valley want their sewage treated here. I think we should have a new plant that will exceed present capacity in a central location in the county, such as Oregon City
26. I think everyone needs to have a realistic view of the growth, and not just "want a small community like it has been in the past."
27. The plan that was approved September 2005, "Clearwater" or something like it is what should happen. Thus closure of Kellogg & move the flow to Tri-Cities is what should take place. Also Milwaukie should (MUST) get a voice in the district. If you look at this survey, etc. it looks like Milwaukie is the "step-child" and has little or no input, and is

- segregated out. This is not a good thing, this is why Boston had a "tea party"; taxes without representation. Milwaukie has over 30% vested interest (flow) into Kellogg, but has little or no voice.
28. "Local control" means just that. Do not attempt any kind of governmental holier than thou demigodliness to the taxpayers who (somewhat warily) countenance you. Capeesh?
 29. None of the principles listed are important to me. I am more concerned about what is really behind the drive to close down the Kellogg plant. Which, in my opinion, is nothing more than Empire Building by individuals in the County. There is no reason to close a functioning multi-million dollar facility that can be maintained, upgraded and expanded as necessary.
 30. The Kellogg Creek sewage plant has adequate capacity and room for expansion to accommodate the needs of the CCSD customers for another 20 years. That's all I care about.
 31. I am for upgrading and renovating or building new facilities, while monitoring costs associated with them closer than most agencies currently monitor them. We need to keep costs under control, while having plans in place before building, and have checks and balances in place to see budgets are adhered to.
 32. I definitely support option A 2
 33. Reduce the number of outflows, provide efficient cost effective service to all users, and protect our water resources. If 1 is better than 2 or 3 than there should be only 1 plant.
 34. While local control is important to sustain, and hold in accountability, the livability of a neighborhood, for an infrastructure system such as wastewater management it is vital that what is best for the REGION, including practical wastewater management, environmental controls and complete economic (maintenance) impact, be the deciding factor. Costs should only be one of the factors, not the only or most important factor.
 35. The main concern with respect to sewage treatment plants on the Willamette, no matter what county, city or other, should be environmental above all else. Consolidation of these plants is vital to improve this waterway and help restore the eco-balance. I know that many people in Clackamas think, "I get my drinking water from the Clackamas River so it doesn't affect me." This view is shortsighted and will result in the eventual death of all aquatic life in the Willamette period. We as citizens are presented with the opportunity to make the Willamette River cleaner, and that [Truncated on Submit]
 36. builders and new homes are not paying enough. We paid a lot more when sewers went in 30 yrs. ago and now we are paying others bills
 37. do not worry so much about controlling the operation and spend more time on improving our natural resources by having the best operations possible
 38. Our systems are adequate now and cost of water environment services is 4 to 5 times the cost of water. I don't think any additions are needed and will resist any proposals.

39. You don't make a move that increases taxes or rates without a vote by the people who would be paying these increases.
40. West of 122 st to Willamette river + the core area around Happy Valley grade school, South of the county line to the Clackamas river should stay in tack. If a new treatment plant is needed because of the growth east of 122st the burden should be placed upon the new development Area. After that area's Treatment Plant is paid for, then and only then should all further costs of the complete system be shared by all users.
41. Environmental and Community Impacts are the most important. We need a system that serves the community not a few individuals on the board of committee.
42. Overriding principle in our mind is that the burden of the cost to increase treatment capacity infrastructure should be borne primarily by new construction in the area. Existing residents and business should only share the cost of technology improvements, not capacity increase.
43. It is improper to combine environmental and economic impacts in one question. A client may wish to express different values for the environmental impact than for the economic impact
44. Seems like there are unnecessarily too many artificial governmental and jurisdictional boundaries associated with providing this basic service to the community.
45. Long term plans and capital investments must be well thought out using technical insight. Regionalization of service providers is the future. Coordination is needed between all service providers to craft an efficient plan.
46. county commissioners have managed this service district for years and done an outstanding job...
47. New home builders should not be put into "Cost to ratepayers" Builders should have their own category. Due to the thousands of new homes, the builders should be putting their fair share into water services, roads and schools. They do not!
48. All these can be important. Only with a specific issue can you balance one against another. However, it seems the economic interests and sewerage needs of the ratepayers, current and future, must be the first consideration.
49. I cannot understand why the houses that sit on Johnson Creek are not connected to the sewer. Portland & Clackamas have nearby lines. The three legged frogs say the creek is not clean. Please make the creek safe again for kids fish & frogs.
50. I am OK paying for upkeep in my area. I AM NOT OK PAYING FOR NEW DEVELOPMENT! Let the Developers/Builders/New Home Owners pay for these costs. I am retired on limited Social Security and FAST being edged out of my home by rising utilities!
51. I am OK with paying for upkeep in my area. I AM NOT OK WITH PAYING FOR NEW DEVELOPMENT! Let the Developers/Builders/New Home Owners pay for their own Water

Environment Services! I am a retired senior living on limited Social Security and FAST being shuttled out of my home by rising utilities!

52. I am OK paying for upkeep in my area. I AM NOT OK PAYING FOR NEW DEVELOPMENT! Let the Developers/Builders/New Home Owners pay for these costs. I am retired on limited Social Security and FAST being edged out of my home by rising utilities!
53. The most important goal should be efficient construction at the most economical cost for the longest term. Second most important is the physical impact of any plan on each of the neighborhood aesthetics. Time and again, we Americans have chosen to pay more for something nicer. Allow those that truly can't afford indulgence to sign up for a lower cost program. This must be monitored in conjunction with cost benefit ratios as well as actual income level.
54. We need a 3 stage processing plant.
55. We need efficient service/treatment with minimal impact on the environment. We want clean rivers.
56. Relative to costs, my experience has shown the most cost effective system is the one that requires the least amount of pumping of sewerage. The general principle that treatment plants should be located at the lowest practical point in the service area usually creates this economy, in the long hall. Relative to the final environment. Sometimes it is not a simple solution to keep adding capacity to an existing treatment plant. Greenfield construction of the latest technology often provides the most cost effective and least damage to the environment as well as cost effective remediation of [Truncated on Submit]
57. I think we really need to take a good look at all the new building done in this area, both commercially and non. I feel the commercial part should part more than the household families. Before building anything new, let us take a good look at it and the cost. Face it, people are getting where they cannot keep paying more. It is getting to be a sacrifice to a lot of the elderly.
58. What is meant by by political durability under costs? Was local control one of the charges of the commission?
59. It is extremely important that local control is maintained. This allows a more user friendly system. The residents of the area served need to have a real say concerning any and all issues.
60. County services are not the problems of Milwaukie, and should only be provided in emergencies with costs burdens by those requesting the same.
61. Solutions need to incorporate a more logical, scientific rationale as opposed to determinations made from a dramatic, emotional basis
62. New home builders should pay for any upgrades to system.
63. Some people like Jim Knapp are paranoid about losing control of sanitary sewer for unincorporated Clackamas county. His personal feeling that the area will be taken over

by Milwaukie or Gladstone outweighs the logic of Regional, Environmental and Economic impacts. The false misleading material he has previously printed and distributed was a "knee jerk" reaction. Shame on him.

64. It would be a far more fair survey if you made it clear that "local control" is only control by the CAC, not all the sewage customers in the area served. More than 60 percent of us are not represented by the CAC and will not have "local control" until the CAC is abandoned in favor of a broadly representative body.
65. The quality of Life issues are the most important!
66. I would like to see less internal bickering for control and more cooperation between groups. There's no doubt that we need new or updated services, there's been at least 100 new home in Gladstone alone in the last 3 or so years. Maybe we don't need another project plan, we need an arbitrator.
67. A Citizen Advisory Council has the potential of holding costs, however, their lack of knowledge of holding valid options allows too much opportunity of influencing their decisions. New home builders do not pay a fair portion of community services. Long-term costs should be calculated by professions and assessed properly to new construction.
68. cost to ratepayers and cost to new home builders should be separate questions because builders do not pay rates to the district they pass on those costs to the home buyers that create the need to build new capacity. GROWTH SHOULD PAY FOR GROWTH.
69. cost to ratepayers and cost to home builders should be a separate question.
70. Values shared by the citizens of Milwaukie include not being the City of Portland, nor Clackamas County's doormat! We have been split up with major highways and railways, for other people's profits. We have a transit center in our unusable downtown, we have a sewage treatment plant on our riverfront, we have people who don't want us to have parking downtown because they can make more profit by having no parking. The current residents of the city are apparently not too welcome in the city as the smell of sewage wafts over the town, there is no place to park and the city has run out [Truncated on Submit]
71. Local control of our sewer district and costs for ratepayers, short, mid and long-term concern me the most.
72. Local control is needed with cost to ratepayers and economic impact the most important aspects, decommissioning the milwaukie plant just because they don't like the smell is not important. The plant was there when they purchased their homes. If the plant can be expanded to meet the demand it should be expanded.
73. Don't lump new homebuilders and ratepayers into the same category. They're entirely different classes of folks. New homebuilders pay SDCs, keeping rates lower for existing ratepayers...so the cost impacts to these two groups (new homebuilders and existing ratepayers) vary depending on the treatment option that's selected.
74. new homes should bear the most of the cost. existing rate payers should not have to pay to upgrade the system to make room for all of the new home growth.

75. I think it's shocking that the CAC is more concerned about control rather than the long-term impacts on the environment. The CAC is myopic in that it is more concerned about rates than treating wastewater properly to help clean up the Willamette and making it a natural resource that people -- long after the CAC members and I are gone -- can enjoy.
76. Take over our district. Throw the commissioners out!
77. your survey request for business info/doesn't apply to this household.
78. I realize that my input may be swayed by the fact that i live in Milwaukie, but i think that having the sewage treatment plant on the Willamette River is a huge mistake for Clackamas County as a whole. We are the first stop for many coming into C.C. Let's take back our waterfront and let it benefit all. Thank you.

Local Control

1. Unless we have a truly regional sewerage program where all ratepayers pay the same basic rate to achieve a highly drinkable water discharge, then the district will need to control its destiny. However, by doing so, we are narrowing the difference between living in a city and living in an unincorporated area. If that occurs, then I believe the public will expect more out of our Board of County Commissioners to provide a service level comparable to those of cities. Then there will be very little difference between the two local agencies. However, then the traditional delivery of state servi [Truncated on Submit]
2. Citizen Advisory Committees are valuable sounding boards, the important interface between the utility and the people it serves, but decisions regarding operations, maintenance, and management should be left to the professionals at WES.
3. See previous comment about the need for CCSD #1 to have a locally elected board of directors. Besides the issue of representation, a independently governed authority or service district would likely have much lower overhead by not subsidizing the Clackamas County general fund through "allocated" costs.
4. The more information buttons/text don't explain much. So the district owns the plant, what is the alternative, ie who else would want to own it?
5. Regionalization is a viable option that will provide the most cost effective benefit for the region.
6. I'm not sure it matters who owns the treatment plants as long as they operate well, are designed and built to modern sustainability standards, and serve its ratepayers well.
7. I don't believe that Clackamas County actually intends or believes that it can handle the upcoming capacity needs within the district at this sewage treatment plant. Otherwise we wouldn't be taking this survey, it's that simple. It's no secret that the CAC is comprised of citizens that are not directly concerned like Milwaukie residents and Milwaukie city

officials are. Every body knows the treatment plant is located in Milwaukie despite what the Clackamas County officials are saying. I can stand in downtown Milwaukie and see the plant 200 feet away! How can you leave a larger percent [Truncated on Submit]

8. THE CITY OF MILWAUKIE HAS DONE IT' SHARE IT'S TIME TO MOVE IT.
9. Please move that beast and put that beautiful waterfront property to a better use!
10. Ship our sewage to Pasco if possible. I really do not care who treats our sewage. What is important is that it is done effectively and efficiently and with little impact to the environment. It is important that there is a voice for the citizens being served on whatever kind of board is designed to run the treatment system. However to say that this current CAC should be the one to be the voice is a bit silly. How was this CAC assembled? What considerations were taken into account for inclusion on the CAC? If these are the most qualified then why were so many of them pre-disposed to be [Truncated on Submit]
11. The sewage treatment plant should be removed from the Milwaukie riverfront.
12. I do not believe that local control will result in long-term cost savings. In fact, I believe it would be just the opposite.
13. I see something more like a committee like City Council, with representatives from all districts affected having equal say.
14. The most important aspect is not so much cost right now but local control now and in the future. not control by the county.
15. Repeat after all who've entrusted you: "I shall never try to screw you over, ever!"
16. Since oak lodge new board members hood winked public in not joining us to route sewage to O>C . every one for himself
17. If the cost is too high why would I want to pay extra. If the CAC wants a voice form a Governance that gives them power but not at a high cost to rate payers
18. While local ownership seems to mean control, it can be a major hinderance to building and maintaining the best system, by limiting vision, ratepayer base and even plant quality.
19. New housing, commercial buildings etc. should pay all of the costs involved for sewage
20. Don't be so worried about local control. It is my experience that greater cost efficiencies can be gained by consolidating services and reducing and / or eliminating redundant services.
21. This needs to me a regional solution to be succesful. Waste water effects us all.
22. I think local control of schools and public safety is more important than local control of where and how my wastewater gets treated and disposed/reused. The community as a

- whole just needs to I.D the most cost effective approach that protects water quality and if that can tie into economic growth that is even better.
23. CAC should focus on service to customers rather than ownership of a plant.
 24. This should not be a criterion.
 25. And works with partners to look at a regional solution
 26. Unless a truly regional treatment facility is being considered, meeting the needs of the district is essential. I have seen very large regional treatment facilities work very well. These covered many municipalities in a given watershed.
 27. Are you planning treatment plants in all communities? Since representation on the CAC does not include citizens from Milwaukee, I do not think that the CAC is able to have a voice for everyone.
 28. Local control to minimize rapid growth and run away costs
 29. "Local Control" provides the opportunity for an agency to operate more efficiently without external constraints.
 30. A Regional system only makes sense for long term cost effective processing. It is simple. With a guaranteed customer base is it more cost effective to run one large plant or several small ones. The answer is obvious in any type of business with a given customer base.
 31. I read the Board Order, and this does not belong in this survey. Also, what about the benefits of shared control? Sharing responsibility with a regional sewage plan has its ups - especially when something goes wrong and the cost is shared. Where is that in your survey? Without it, this part of the survey is one-sided and leading.
 32. Again, having a small body of clearly biased individuals in charge of north-countywide sewage is ludicrous. What we need is a systemwide, regional approach, not the petty narrow mindedness that has governed this council to date.
 33. Persons making up a Citizen Advisory Council lack specific knowledge to make a intelligent decisions. I favor employing a manager with experience and expertise to run the program. Citizen Advisory Committee takes time, delays action and costly. It allows management an alibi for poor management.
 34. Are there locations suitable for a sewage treatment plant in CCSD1? By "suitable" I mean not in someone's backyard.
 35. It is most important that Citizens have a voice in the Management and Implementation as long as they are not being steered in a certain direction by those that have a certain agenda.
 36. CITIZENS NEED A PLACE TO VOICE CONCERNS OTHER THAN WITH THE COUNTY COMMISSIONERS.

37. I think "local control" is somewhat important, however I think this appointed CAC group has their own pre-conceived notions, certainly doesn't care about the citizens of Milwaukie and most certainly is focused on its own power over the decision-making process a whole lot more than whether or not a long-term, viable solution is reached. If the CAC doesn't want to be vilified by future generations, they need to make a decision that will serve future generations well, so no one has to go through this 25-40 years down the road and wonder how the CAC members were paid off to reach [Truncated on Submit]
38. We need to own our plant, have a say in the management and implementation of same and meet our wastewater needs.
39. Most important... Local Control
40. A moratorium should be placed on new development if plant capacity is reached and developers are unwilling to pay system development charges. The North Clackamas School District is a prime example of what happens to livability when developers don't pay their share.
41. I realize that having a citizen advisory council sounds good, but i have to say i've been less than impressed by this whole process. I don't feel as if the needs of Milwaukie are represented at all. Frankly, i feel as if there is a hidden agenda and that most of the council is steamrolling this agenda.
42. If a new tri-city plant is implemented there are other ways to have a voice in management and implementation. It will cost far more money for the county to build, buy, and own it's own wastewater treatment plants and I thought cost was the big issue here. I am willing to pay my fair share to build a new, state of the art, consolidated tri-city plant, but I am not willing to pay to buy and own it.

Effects on District and Milwaukie Neighborhood

1. Political pressure will continue to encourage the highest performance, no matter where a sewerage plant is located. Yes, the Kellogg plant is getting older (35 years). However, in CIP terms, 100 years is the proper life cycle to judge our investments, not 20 or 30 years. This investment has not matured yet and the city of Milwaukie bought into the solution. What would Milwaukie have done in 1970 if they had to go it alone at that time? Milwaukie's misery today will be Oregon City's tomorrow if they take on a "regional" facility. But what about other city/county services [Truncated on Submit]
2. The citizens of Milwaukie have made it clear that they support decommissioning of the Kellogg Creek plant, using the valuable waterfront property for better use. Again, the "criterion" and attendant "i" are not really clear. I think it is "Most Important" that the citizens of Milwaukie get the desired "effect of plant on residences and neighborhood"...that the plant be done away with! Short term impacts of construction are of no consequence beyond the temporary inconvenience they pose.

3. What pipeline construction? I have had NO chance to vote on such a proposal. Maybe the makeup of the board should be changed to better reflect the wishes of the people. It appears that the board finds it necessary to demonstrate their own perceived control.
4. See previous comment about the relative cost and benefit to the City of Milwaukie associated with moving the Kellogg plant. North Clackamas ratepayers should not subsidize Milwaukie's riverfront redevelopment.
5. RE effects on residents: Who is complaining? The plant has been there for 30 years - longer that just about every resident in the neighborhood. The plant is not ugly by the way. I'd guess that 50+% of drivers on McLaughlin don't even know that there is a sewer treatment plant there.
6. The current location of Milwaukie's treatment plant is really not ideal. It sits on a prime piece of riverfront property. Moving the treatment plant would allow commercial or recreational use of the property.
7. Plan to minimize public discomfort.
8. The Milwaukie plant should not be expanded..it should be shut down and phased out.
9. The Island Station and down town Milwaukie has done it's part for the region
10. Please move that beast and put that beautiful waterfront property to a better use!
11. Short term pain for long term gain. We need to remove the Milwaukie treatment plant for long term gain for Milwaukie and the waterfront.
12. It's worth a bit of construction chaos to built the facilities we need to serve us long-term!
13. This is a real opportunity to open up some of the waterfront to easy community access. It can only benefit the citizens along the river to increase public access and park space. Kellogg is in a terrible location when it comes to public use of land.
14. see previous comment
15. The sewage treatment plant should be removed from the Milwaukie riverfront.
16. Construction is always disruptive, but necessary to make improvements that will serve our population. We can't just maintain the status quo and have no disruption.
17. We need our riverfront for public green space, farmer's market, small business, parks, waterfront activities such as public docks and boat areas.
18. The construction is temporary and can be tolerated but having it on the waterfront is offensive and the land could be used for more income producing business like a hotel
19. I just don't like having an old plant that needs updating, right on a riverfront. Though I do respect that many people don't want a NEW sewage plant in their own neighborhood. But it has to go somewhere!

20. The Kellogg plant should remain in use unless there is other alternatives that are less costly and more efficient.
21. Effect of Plant/Pipeline construction, have no effect if control is local .
22. Spare the hoods, don't go frolicking off like it's someone else's money. It's ours, dammit! - and don't succor unto some other screw ball enterprising interests bent on picking our pockets like \$um carpet bagging pie-eyed piper.
23. Sewer plant was in existence when people who are now wanting to relocate plant. should live with it
24. It is important that whatever the decision that the impact to residences now and in the future is considered.
25. Kellogg Treatment Plant smells, making having a backyard dinner or picnic very unpleasant. Overflow in the Willamette is dangerous and disgusting to anyone using the riverfront nearby such as the boat ramp, fishermen, and anyone doing watersports in the area.
26. Plant needs to fit as much as possible with its surroundings. Spend the money now to have a good system that will last for years to come.
27. We need to select quality, qualified contractors who know their job but also are considerate of the citizens in how and when they accomplish installation. We need good oversight to make sure that we get the quality work that we deserve and are paying for. Keep to the budget and do a good, workmanship like job for a change.
28. sewer service by a government should always include a focus on long-term issues
29. I believe the long-term impacts is Most Important
30. Work is long overdue.
31. I'm curious how we got to building a plant
32. With the North Clackamas Revitalization Area requiring extensive new service the proper handling of the needed capacity must be incorporated in the treatment plant capacity and location.
33. Effect of plan. As we have learned in Milwaukie, beautone can't make a silk purse out of a sows ear. Millions have been spent on controlling the odor of the Kellogg plant, to little or no avail.
34. Controlled by required maintenance and minimal growth within the infrastructure.
35. Do it right. Do it now. The future will not make it easier.
36. It would be nice if we could find a solution which allows Milwaukie to regain their Waterfront. However, I don't think that in and of itself that should be the guiding principle. We need to take a broader view, and think onward to the 7th generation.

37. This is a very minor consideration that requires only common sense to serve a community.
38. everyone knows that construction will be necessary for any improvements and are used to that.
39. CAC members have been invited to bring the kiddies for a swim at the Milw. Riverfront and seemingly have declined. The odor is foul and right out people's front doors, not to mention wafting over the City, regardless of how much "mitigation" has been touted. Since Milwaukie is torn up now and will likely be for some time, I doubt that a few more inconveniences for sewer pipeline, etc. can make it too much worse. Now is the time to get this done and done right!
40. Milwaukie, grow up. You wanted and begged for Kellogg back in the 60's and 70's, you got it, live with it. Its not a portable site that can be moved around easily. If you don't want to live near it, don't buy there, but don't think it is going away anytime soon. DEQ doesn't pass out discharge sites like lollipops, so Kellogg needs to stay. There is no odor, no ugliness in viewing the structure so quit with the arguments. If you think your house values will go up if Kellogg is removed, guess again. Home prices are falling, the boom is over, the train has pulled o [Truncated on Submit]
41. Don't lump "District" and "Milwaukie". Milwaukie is not within CCSD1; they've intentionally chosen the path of being a wholesale customer of the District's plant. They're two separate entities.
42. Milwaukie has had to deal with this long enough...
43. The Kellogg treatment plant in the park setting is a plus for milwaukie, rather than an UGLY CONDO BUILDING with cars parked around it.
44. The Kellogg plant has been sited there for close to 30 years. Expand it to the site capacity.
45. will household waste waters have any down times? how long / will we have advanced notice ?
46. In my opinion the CAC has made it quite clear that Milwaukie citizens concerns are not relevant to this issue, so I again state that environmental concerns should be the main focus. That way, doing what is right for the greater good of all citizens is put first.

Cost to Ratepayers and New Home Builders in the District and Milwaukie

1. Clearly, growth must pay its way. Growth does not necessarily bring prosperity and economic development. It should not be subsidized. Many are very upset over large

multi-national corporations being subsidized by Oregon taxpayers (example, Intel). However, growth certainly increases service demands, which is clearly illustrated in sewer. I have yet to see a housing or industrial development that does not generate a sewer treatment demand (unless they are all on septic or some other high tech treatment system). A subtle issue however is surfacing. Should development pay for the relocation [Truncated on Submit]

2. It is very important that developers pay a FAIRER share of development costs than they presently do. That said, it is also a simple reality that ALL of us are going to have to pay more for ALL our utilities, including the cost of wastewater treatment, in the years to come.
3. According to the previous Wastewater Treatment Options Study, keeping Kellogg intact and diverting future flows to an expanded Tri-City plant (Option 2) had the lowest 30-year life cycle costs. I seriously question whether the alleged operational cost savings of "consolidation" would offset the substantial capital cost of replacing Kellogg in any reasonable time frame.
4. Now you are talking. How much will this cost!!!! this is the over riding issue. Second is who pays. New growth should pay it's way, not the existing customer base.
5. The City also benefits from growth, although infrastructure improvements should be borne to a large extent by those who will profit most from development.
6. Why isn't wastewater treatment under the umbrella of Metro. Its about growth, its about waste and its about regional impact. Why are there separate districts throughout the region. Seems like there could be a better way to organize and manage wastewater in the region.
7. CONSTRUCTION SHOULD PAY IT' SHARE
8. Please move that beast and put that beautiful waterfront property to a better use!
9. While new growth should pay its fair share, they cannot be expected to bear the entire cost of a new facility that will be used by the entire community. All citizens should share in the cost. I would be in favor of systems development charges for builders to build wastewater treatment services for new areas.
10. Fees are going to go up. Kellogg has not been maintained for the past few years. The new regulations coming along are going to force improvements at a plant site that does not lend itself well to expansion. That will force rates up anyway. There could be an increase in builder fees to take some of the sting out of new construction necessary at the tri-cities site or at a new plant facility.
11. I think that new development can and should absorb costs for an appropriate infrastructure and that includes the movement of the treatment plant
12. A well designed development will certainly pay for itself in time, especially if the development is located on the RIVER!

13. It will be most cost efficient to remove the sewage treatment plant from the Milwaukie riverfront.
14. Probably not all growth can be paid for by current growth because we must prepare for future growth. Eventually the future growth will help repay long-term financing debt.
15. Happy Valley is building everywhere. They want to send us their sewage. I say no. There are residences everywhere, but no amenities, meaning everybody there needs a car. This is not development, this is California.
16. I definitely think that new home owners and builders need to foot more of the bill. I already own my own home, and don't see how I should have to pay for their new home's amenities. I am willing to pay for the maintenance of a new system, but not necessarily building it....or helping with building it, but at a lower cost than those new homes/developments.
17. I believe homebuilders should pay system development fees that help pay for future growth of facilities. If these fees do not cover costs of facility upgrades then the ratepayers should pay more. Also it is very important that WES sets aside a percentage of all fees for future upgrades in capacity etc...Lets not go through this again!!
18. We would have little control over future fee's if consolidated. Growth in Milwaukie is going to be minimal
19. Like growth warts on a zit! Stomp the insanity! North Calamitous County has had enough, already!
20. keep costs down, service high, and remember the reason for renovation or rebuilding...more growth, so allow the new kids on the block to subsidize these costs!
21. New users should pay for expansion of existing facilities
22. No question it is the obligation of development to pay their fair share and this extends to schools.
23. Even on a limited income such as mine, I recognize that money is NOT the be all and end all of deciding on the very best solution to a major infrastructure system. There are economic consequences to demanding the safest, most efficient and long term state of the art water system.
24. builders need to pay more and rates should be assessed by number of persons residing at residences, not a flat fee as is now done
25. fees should be paid by users new construction should be required to put in all piping needed and pay for hookups in a separate fee base
26. Builders always want someone else to help them pay. You have to remember they are thinking of there self first. No mater what they say. It may not sound like it but I'm for growth, as long as the growth pay it way. The county need to come up with a IMPACT tax on services, Schools Ect. Yooooo New taxes, But is need to be.

27. Builders and new growth should foot the entire bill, ratepayers should not be affected. Doubling the rates is unfair to existing ratepayers.
28. New homebuilders MUST pay for growth!!!
29. New growth needs to pay their true full costs. Existing residents need to pay for a quality system that will meet the needs and existing region and provide for expansion as the region grows.
30. Unless we are talking about going to the Columbia and/or zero discharge, I can't see there being a huge difference in the costs to treat to Willamette River discharge standards. So costs, which important, at this level of analysis becomes a non-issue.
31. It is essential that we establish reasonable rates for all citizens. We have an increasing population of older citizens who are on limited income and we need to respect their desire to stay in the community as long as possible...we can't kill them by the burden of ever increasing rates. We need to have responsible management.
32. rates are important but quality of life is the key when determining rate structures and schedules as they impact citizens differently.
33. I think the new building should pay for the improvements. They are what are putting a strain on our resources.
34. Again, builders should be paying greatly into all systems. (schools, road improvements, etc)
35. I believe builders have the opportunity to pass this cost to their customer. I am concerned for the residents on a fixed income, increase costs (in part) may impact the persons on fixed incomes immensely. I may complain about the costs, but I work, I have the opportunity to increase my wage, my Senior or disabled fixed income household is at the mercy of the enforced premiums for water & sewage coverage. Perhaps we can set-in a refund/credit for households of lesser annual income?
36. It's my feeling that New Home builders should pay a substantial cost of new or added growth costs.
37. Contractors/developers should be assessed higher fees for new development
38. Let GROWTH PAY FOR GROWTH!
39. The sewer rates should be tied to water usage, with an adjustment for summer lawn watering if usage jumps above the average. It's not fair for a single person to pay the same rate as a family of six, which is how it's currently structured.
40. New houses must bear the majority of costs related to adding to infrastructure.
41. Developers and new people moving into the district should pay the bulk of the construction costs. Some of us that have lived here for 30 years, have paid for the current treatment plant and now the new residents should shoulder the financial load of moving to the district.

42. Often the burden of new connection fees is hard on individual home owners. My experience has shown that tax leans provide for postponement of these bills until the properties are sold. This has helped many older and poorer residents get by.
43. I feel those who have lived in their own homes for more than 30 years should get a reduced cost and it should be based on how long each person has lived in their household and income. Those who live in these new home areas should pay more....why....they are the cause of having to expand.
44. Cutting costs at this stage means cutting quality.
45. New costs should be funded based on new development, not on the backs of existing ratepayers.
46. Costs to be absorbed by those who request the same
47. System development charges (improvement & reimbursement) should be used to assess new growth their proportion of costs. Costs & rates should be determined by "realistic" numbers rather than "low" ones.
48. Growth Must Pay for the entire costs.
49. Through SDCs, growth will pay for growth, and long-term ratepayers will pay the same rates as new customers. That was the consolidation approach. It still makes sense.
50. current ratepayers should share cost of process improvements but new customers should pay most of cost for new capacity
51. Developers that make their money by building and selling new construction should have to pick up the tab on it rather than making the citizen who has been living here, and who is quite often adversely impacted by that new construction, pay for it... this should extend to streets, schools, parks, also, as well as water/sewer issues. It is grossly unfair for developers to make their wad of cash at the expense of the people who live here.
52. SDC's need to be raised to an appropriate level to cover today's costs, like \$7500 or \$8000 (sorry Homebuilder's Assn., but you have not paid your fair share for a long time), rates and fees need to remain fair to the ratepayers who have already paid for a sewer at least once in their lives, and rate increases just to stockpile a huge amount of cash in the reserve funds, is totally unnecessary. You are not a bank, you are a quasi-governmental service agency who doesn't need to have a huge bankroll at ratepayer's expense!
53. New home builders should have to pay for the expansion of the system.
54. New homebuilders and existing ratepayers shouldn't be in the same category. They're entirely different classes of folks. New homebuilders pay SDCs, keeping rates lower for existing ratepayers...so the cost impacts to these two groups (new homebuilders and existing ratepayers) vary depending on the treatment option that's selected. Both of these options were marked "most important" by me. Growth should pay 100% of the costs that it places on CCSD#1...this will keep existing ratepayers' rates as low as possible.

55. Keeping Kellogg is the lowest cost option for the ratepayers. If the fools in milwaukie want Kellogg out, why don't they pay for it.?
56. should their be rate increases is there a % cap.and how long?
57. If we are at capacity, we are at capacity and most people will realize that they don't have any option other than to pay more. New growth or not, the existing facilities are old, out-dated, and at capacity. I look at it as the difference between buying a new car or a used car. With the new car you have a warranty, you know that it has new technology which could save your life during an accident, and you know that if you bought a hybrid you will be driving it for a long time to come. If you buy a used car there is no warranty, the technology is old and will need to be updated.

Effects on Other Jurisdictions

1. Let's face it, people DO look at BOTTOM lines.
2. I'm trying really hard to hang in there and complete this little exercise, but at this point my frustration level is off the charts. Now I'm beginning to gather that what you mean by this obtuse reference to "Other Jurisdictions" are the growth areas to the east, Happy Valley and Damascas. Jeez guys, could you have maybe SAID THAT in your explanation?! So now you want me to tell you how important I think it should be that we consider the obvious in our decision-making, the obvious being that growth is coming and we're gonna have to deal with it? OK, I'll bite. It's [Truncated on Submit]
3. If Tri-City ratepayers would realize long term rate benefits from consolidation, then they should share in the initial capital cost.
4. Please move that beast and put that beautiful waterfront property to a better use!
5. When you consider financial impacts, realize that besides the added cost to ratepayers, there is also the positive benefit of the new business this brings to our community for contractors, construction workers, material suppliers, etc... Spending public money brings jobs to our community!
6. I think it is important that it doesn't land in another spot that harms a potential county jewel such as the waterfront but the short term impacts are just that - short term and I think long term thinking is needed here.
7. Financial impacts will be the most important aspect of putting Milwaukie on the map for destination places for business and life style.
8. The best effect on all neighborhoods is to remove the sewage treatment plant from the milwaukie riverfront
9. We want to be good neighbors and not create any more negative impacts on them than necessary. However, this does not mean we should refrain from doing the construction necessary to serve our area.

10. Equal voice from all jurisdictions affected.
11. Milwaukie does not want the Kellogg plant and will probably continue their efforts to decommission the plant in the future...Common sense should dictate that it is not desirable to upgrade this plant for additional capacity. However Kellogg should not be closed at additional cost to all ratepayers. This is most important!
12. It must be fair and based on sound business practices
13. Fewer, but literally state of the art, treatment plants have a positive effect on neighborhoods in the whole region. Wastewater plants should be beneficial to a large geographical area keeping management and efficiency at the highest level. This is not and can not be an "out of sight out of mind" or "not in my neighborhood" attitude, but rather a long term plan for long term capacity in a region, not just for my little neighborhood usage.
14. no more paying for new homes being added to sewer, until they pay for it
15. growth requires spending and costs go up as does values. more people, is more income, along with the need for expanding to treat their waste
16. The region and all the effect districts need to see and understand the true cost of a regional system. If we don't make a commitment to a regional system now it will just get harder and more expensive in the future when the population size of the area requires a regional system.
17. Good planning and communication to those affected is so important. Staging any project and involving those who will be impacted is vital. Building schedules on respect, reasonability and quality work will gain the support of those involved. Having an articulate, honest, hardworking supervisor who can stay on top of things and communicate is essential.
18. all decisions regarding plant/pipeline construction should have a long-term focus as to what is good for the community...if other amenities can be accomplished when relocating plants and/or building pipelines then we should consider. Partnering with other like agencies like tri-cities makes sense but not with sunrise water district as the water providers have enough challenges to face without adding sewer headaches.
19. Looking at the treatment facility in Vancouver I would hope we can provide non impacting operations to the surrounding community and the environment.
20. Enough money needs to be budgeted to assure a quality, long term, environmentally sensitive project. the installation of sewer lines must be tied in with local public works projects.
21. Boundaries are boundaries as should costs be
22. The development of collaborative & synergistic approaches might reduce or eliminate liabilities & impacts on other jurisdictions.

23. Again, we need to be looking at the entire region, and down the road at least 50 years. Politically, if the plant negatively impacts on residences and a neighborhood, such as the Cove in Oregon City, you can expect to get some push back and resistance/resentment. Better to find a place that is in an industrial area, such as the north end of Milwaukie.
24. Cost analysis should be central in planning. Committee meetings only serve to delay action. Professional engineers should be employed who are cost conscious and proceed with a program. Long term planning is very important. Employ a professional and hold that person responsible for operating efficiency and costs.
25. We need to make sure we are not messing up other established neighborhoods with whatever is put together, however, if a neighborhood is built after the decision is made, that neighborhood has no complaint!
26. I am tired of hearing Milwaukie trying to make Kellogg go away, it has to be in someone's backyard, its in yours, live with it. If a new plant was sited in an industrial area, then I would like to see us be a good neighbor and do what is reasonable to make them happy (as we have repeatedly done with Milwaukie who cannot be satisfied). If Milwaukie thinks the ratepayers in CCSD#1 are going to pay for Kellogg's demolition, think again. They can't afford to do it and we ARE NOT going to do it for them. As for short-term impacts of plant/pipeline construction, who cares? We are a [Truncated on Submit]
27. You should not decommission a plant and charge ratepayers to pump sewage to Oregon City just so Milwaukie can have a park on the river.
28. The impacts on Milwaukie over the years has been substantial, and the plant is 30 years old. Even on what I suppose are its good days when one walks by Kellogg (with the lovely river and Elk Rock Island and Dunthorpe on the other side)the chemical smell stings the eyes and catches the throat. What are you thinking! Give us a break rather than freezing us in time by harboring some kind of long-term animosities that most people don't remember.
29. When will Tri-City offer to pay their share to fix up their old plant?
30. See previous statement about Milwaukie concerns as viewed by the CAC.

Mid-Term and Long Term Costs

1. Our key problem today is cost to move Kellogg facilities to somewhere else--IF (still a big "if") another jurisdiction is willing to accept the plant. "Cost" must include the long range environmental and social costs. What might seem a good political solution today, might lower our quality of living 50 years from now because we've thrown too much money to solve sewer, while other festering issues (like surface management and riparian habit and water quality for wildlife and humans) receive less attention and funding. We are now seeing issues like schools bumping into ro [Truncated on Submit]

2. See previous comment about the payback period associated with capital investments. 30+ years is far too long (and speculative) to recover the added cost of replacing existing treatment infrastructure.
3. Truthfully this line of questions delves deeper than most ratepayers can opine about such detail. Obviously all of these factors have to be weighed in devising a future approach to waste treatment and the appointed and elected decision makers need to do this hard thinking on behalf of others..while also sharing their own opinions about these factors since they are more closely in tune with them.
4. This subject has gone on way to long and the only reason for it is Clackamas County dragging their feet in hopes of gaining something and not spending too much money. Its comparable to saying I'm not going to buy gas for a year when the price drops. Its not going to happen, the longer you drag it out, the more it's going to cost the citizens money and quality of what replaces it. It's a loose – loose situation for the local citizens. Finally, lets get real! Clackamas County is too large of a county to have an outdated 3 seat county commissioner board just like an outdated waste water t [Truncated on Submit]
5. Please move that beast and put that beautiful waterfront property to a better use!
6. If people understand the need and benefits, they will support new or added facilities.
7. Political durability can be built in with adequate representation from ALL communities to be served by any sanitation district. Sanitary boards should not be PAC's, they should serve their constituents.
8. I am willing to pay more in taxes to get it out of Milwaukie's waterfront area.
9. The economic durability is obvious....if we DON'T do it, that's what I am worried about....Milwaukie would have missed it's chance to be the beautiful town it COULD be, and inevitably go down hill....decay.
10. The best long-term plan is to remove the sewage treatment plant from the Milwaukie riverfront
11. Long-term durability and lifecycle costs are extremely important. All efforts should be made to work politically with Oak Grove to help them see the benefits of joining the larger system development.
12. this part of the survey is ambiguous as mid term costs are one aspect and long term costs are mostly speculation.
13. Don't undo what's been done. Kellogg Creek should stay. Damn the half fast politiciancy.
14. These above criteria are among the most important of this survey!
15. Make the decision now because it aint getting cheaper. How many times does it take to learn a lesson. Clearwater was the right decision just make the deal with Milwaukie and the other communities and make it happen.

16. While costs are important, especially the long term costs, it is essential that we get the biggest bang for our buck. It is also vital that we get a first class system, not a cheap one that we will eventually regret.
17. We need our politicians to make the hard choices that will provide the region with a long-term solution.
18. planning flexibility - on the other hand maintaining a higher number of outfalls could increase permitting headaches and costs down the road.
19. building ones own plant just to say you have one does not make much sense. We should have a long-term focus on serving the district customers by any method that is cost effective to the rate payers.
20. Political???
21. These criteria are difficult to understand and to evaluate.
22. I'm trying to live on a small social security income & am already being taxed out of my house, don't need any more taxes. Have lived as single lady in my house for 40 years and it is a small house. Cannot afford any more taxes.
23. Bonding as required.....
24. The freedom to use realistic planning, engineering, & construction practices will provide for quality, long-term facilities with lower operation & maintenance costs.
25. political is anti commonsense
26. By "political durability" it's assumed that you mean perhaps the construction of a neighborhood after the site has been set up for a treatment plant? Or is this aimed at developers who decide they want a piece of property after the plant is built and want to have it moved for their own profits? This is unclear! If you are aiming for a shift in public perception, such as perhaps why the Kellogg site is "no longer acceptable", you might want to check with some of the folks who didn't want it sited where it is now, but were steam-rolled by the power structure of the day.
27. All costs are important but its important to build what we need, incrementally as it is needed, so we don't have sewage flowing through our streets, once capacity has been reached. No need to overbuild either, don't build 20 mgd when only 5 is needed initially. Build as you go and let some of the younger generation pay for this as well as the oldtimers who have been paying forever it seems.
28. I'm not sure about the political durability -- does that mean the County Commissioners getting re-elected?
29. Keep Kellogg. Lowest cost for everyone

30. Again see previous Milwaukie concerns as viewed by the CAC.

Regional, Environmental and Economic Impacts

1. Hey, let's get real. If anyone thinks that the best we can do regarding "reuse" is for limited agricultural uses, think again. Water resources are becoming so valuable that some cities are taking sewerage right out of the river they dump into (including agricultural, urban and forest wastes--all draining into our major rivers, such as the Willamette). Whose to say that its OK to "dump" into the Willamette River, but that the Clackamas River is "pristine" and a NO, NO (no touch). We are draining tons of waste into the Clackamas River every day from point source [Truncated on Submit]
2. Your "i" for Opportunity Costs uses the phrase to define itself...you never actually explain what the phrase means. I don't understand what your asking me to judge, so I'll leave it ranked at the middling, "important".
3. These issues should be secondary concerns, in my opinion. They should only be considered as "tiebreakers" if all else were equal.
4. Create enviro benefit: sure that's good but at what cost. If it raises rates, then who ever gets the benefit should pay.
5. the sewage treatment plant needs to be OFF the Milwaukie waterfront
6. If there is a smarter, greener way to build and operate poop plants...then let's do what it takes to get there. Future generations of this region will derive value from our ability to confront such challenges now, rather than turn away from them..leaving our crap as their heritage.
7. Long-term, considering environmental benefits saves money. Otherwise you are creating a problem that must be dealt with later.
8. Opportunity at to economy of scale and location benefits are important. Current locations are not advantageous to access to the plant or to distribution of products from the plant site.
9. I am concerned about the environment and wouldn't want any placement of this to become a harm to the environment.
10. Obvious.
11. The least economic impact is to remove the sewage treatment plant from the Milwaukie riverfront
12. A sewage treatment plant can go anywhere. We only have one riverfront. We need it to live here, its economic impact is invaluable to our community.
13. Milwaukie's water front is shallow and has no future for large vessel docking.

14. If the Nature Conservancy, who takes "donations" from Centex Homes - and the ACLU who slakes money from what's left of US says yes - then, folks better cast a jaundiced eye toward what's 'toming' next, folks!
15. Reduce the outflows and combine services to protect our rivers and streams. If the price tag is reasonable which has been proven at least 3 times make it happen.
16. Building treatment plants on less potentially developmental land is to be encouraged as is removing treatment plants from potentially high developmental land. Building treatment plants with the largest capacity possible, serving the largest area possible, in the least usable area possible is just common sense.
17. This survey is stuck on this page and will not go further!!!
18. We need a solution that is as sustainable as possible.
19. opportunity costs is a bit confusing. If one is trying to site a new treatment plant I image the process in Oregon based on land use processes would take at least 8 to 10 years.
20. Milwaukie is so disgusting. Houses without sewer hookups is wrong. Johnson Creek has suffered the most. I just miss the days of letting kids play in the creek. Though the county says the emissions are "small", I still do not feel comfortable using the creek.
21. Timing for beneficial costs
22. Protecting the environment has become more emotional than rational. While important, environmental issues need scrutiny to determine real cost to benefit advantages.
23. Most people do not know what "Opportunity costs" are. A better approach might have been to describe opportunities taken or missed, such as installing the pipeline at the same time the Trolley Trail is built. That's a huge opportunity benefit to the tune of several million dollars.
24. The information button isn't working, so I don't really know what Opportunity Costs are. Sorry.
25. Since it is very unclear what an "opportunity cost" really is it is very hard to have any opinion about it.
26. I am not an environmentalist, nor am I in favor of regionalization.
27. My family is willing to pay higher monthly sewer rates in return for the District having a lower impact on the Willamette River. Ways to lower the District's impact on the Willamette River include reusing treated wastewater for irrigation & other non-potable uses and removing more of the pollution from the wastewater prior to discharging.
28. I guess opportunity costs depends on whether one looks at the social and economic benefits of people being able to enjoy their waterfronts or the CAC's NIMBYness.
29. Greater potential for re-use water is east of I-205

30. Again environmental benefit for the greater good of all citizens should be the greatest concern of this committee. If it is not, then this committee has no business as a citizens advisory committee and should be called something else.

Exit Comments

1. Although the results of my survey did not indicate this, I would prefer to see them keep Kellogg Treatment plant open and have the overflow go to the Tri-City plant. I do not see a need to fix something that does not need fixing.
2. What I found interesting is that my values supported the construction of a new plant (not expanding Tri-cities) which is what I generally support. I would rather see a truly regional solution where everyone from Damascus to Tigard pays for on good large (highly techno) facility. But that means that EVERYONE between D and T must also pay (along with 50% against SDCs) to remove "old" stuff--whether it be a Lake Oswego plant or Kellogg plant and redirecting flows through new lines, including force mains. We haven't heard overtures from LO because they seem to have enough money to [Truncated on Submit]
3. I'm pleasantly surprised that my feelings about this issue were actually reflected in my survey results. From the questions, I had no idea how my responses would relate to the actual topic of which alternative was best. Maybe that's the sign of a well designed survey... Many of the principles/criteria baffled me as far as what you were really asking. I hope that I am a lone voice of discontent with the survey itself and that you get lots of "takers". People with loads of patience and LOTS of time on their hands, no doubt. Thanks for asking!
4. I do NOT agree with the final evaluation. I feel if this is the conclusion of my comments, then the evaluation is in error or my understanding of the survey is flawed. I am AGAINST closing Kellogg under any condition. The replacement consideration appears to more political than rational and economic. The question is why does Milwaukie deserve property to build a hotel or convention center at our expense?
5. I think the scoring method is rigged. If you read all of my previous comments, you'll see that I'm very skeptical of closing Kellogg, yet it somehow ranked at the top of my list!
6. I don't quite understand how my survey answers said that there are 42 and 47 % scores for closing Kellogg's plant. That question was not asked. For the record, I'm totally against closing the present plant.
7. We're in favor of closing the Kellogg Plant, and opening a plant at a different location. This would allow for the continued revitalization of downtown Milwaukie, which could bring significant economic and recreational benefits to the city. As one of Portland's closest "undiscovered" suburbs, there are many opportunities for the area, which are not fostered by a sewage treatment plant bordering the river front park.
8. Building a regional plant is the most reasonable path to take. Second would be a new facility on a less valuable site than Kellogg.
9. Close Kellogg.

10. Two Words: Environmental Justice. Its high time to relieve Milwaukie of the burdens and handicaps that having a poop plant on its riverfront have created.
11. A large county like Clackamas County cannot possibly be making the right decisions for its future with 3 county commissioners and a one-sided commission appointed by the commissioners like the CAC. Both of these facts reflect each other and prove that very point.
12. GETTING THE PLANT OFF OF THE WATER FRONT IS MY NUMBER ONE PRIORITY AND I DO NOT WANT TO SEE SEWAGE FLOWING INTO THE RIVER LIKE PORTLAND EVERY TIME IT RAINS.
13. It is obvious that the future will prove that Kellogg should be closed. The regional population will continue to grow. Wastewater plants need to have room for expansion as the population grows. Expansion of the Kellogg site is limited, in the long term meaning 50+ years, and eventually the site will be closed. Start the transition toward the new center of population growth in North Clackamas which is well east of the Willamette river.
14. We need to close the Kellogg treatment plant!
15. I am in favor of building a new treatment plant and closing Kellogg. I am willing to pay increased rates or a bond measure to fund it.
16. If the city of Milwaukie wants to improve its economy and attract investment, it would be a good thing to relocate the treatment plant.
17. I believe the costs to maintain and upgrade the Kellogg Creek plant and other existing plants will in the long run be more than those of building a new modern plant with more potential for expansion. I also believe these plants should if at all possible be away from residential neighborhoods and downtowns as a livability issue.
18. To the CAC members. Please try and keep personal agenda out of your decisions for the community. Looking at this survey I am less than certain that it is consistent with the mandate given to you by the board of County Commissioners. Try and move ahead. It doesn't do us much good to be holding onto control issues when the real issue is sewage treatment.
19. CLOSE KELLOGG! This is very important.
20. The least cost and best way to go is to remove the sewage treatment plant from the Milwaukie riverfront
21. I totally affirm quality of life - and moving the plant from downtown Milwaukie will provide a higher quality of our lives. Overall this will enhance our personal and communal lives.
22. It's nice that my opinion is being asked, here, but I thought we came to this decision a long time ago. I can't believe we're still discussing where to send our excrement. Send it

- someplace we can't see it -- like to Oregon City, if they want it! Can you IMAGINE what we could accomplish with all of the time, energy, and tax dollars being spent on your survey (& etc.), here, if we focused them on something else? Talk about waste ...
23. I'm B1. expand Kellogg send excess flow to tri city..... The shit rolls down hill from snappy valley to the little people....
 24. The graph is correct in that I would like to close Kellogg Creek and send the outflow to Tri-cities. I am not in favor of
 25. The most important thing for Milwaukie's future is to shut down this plant and build a new, green plant to handle all the area's waste using newer methods and green methods. We need our waterfront area for parks, people, pets, places to go. The sewage treatment plant, especially when it will be used by everybody in North Clackamas County, is not good for Milwaukie.
 26. the Milwaukie plant needs to close and use the Oregon city site
 27. I'm for: Closing Kellogg and either building a new site or expanding Tri-Cities to handle all capacity in the area.
 28. "D1" is absolutely the best that could happen, it is a must, you should work to make this go. "D2" is a lower substitute, but may be viable, if not located on the Milwaukie river front or Johnson Creek. "A1" & "A2" are not good, I am against them. If "B1" I would fight it with Milwaukie all the way to the courts & beyond!
 29. Seems a long ways to be pumping sewage from Happy Valley and Johnson City to Milwaukie. Seems something should be closer and if not should be something to serve everything east of I-205 for Happy Valley.
 30. This survey is slanted toward getting rid of the present plant. There is no A1 choice of keeping the present plant and under local control up dating it is need is seen.
 31. Stop any impending in\$anity! If it ain't broke - don't try to affix any gnu costs on taxpayers and rate payers.
 32. We do not want the Kellogg Plant to be closed - send excess to new plant.. This would be a tremendous cost to us....
 33. Plan A 2 is the common sense solution. Thanks
 34. I think that wherever you put the sewage plant, it should NOT be in the middle of any downtown area. Tri-Cities seems like it makes the most sense to me, as I have lived in Clackamas County almost all my life, actually drove by the Tri-Cities plant every week for 15 years on my way to church in O.C. (used to go the back way before they closed that trucker's road to thru traffic), and never even knew the plant was there! Tri-Cities is the least trafficked area with the least amount of direct impact to local businesses and residents. Choice #2 is a new plant, as long as it is in some i
 35. Get over it. Make Clearwater or something like it happen. you have a responsibility to all of us.

36. There are so many perks to the Clearwater project that are over and above the scope of the work, such as the completing of the Trolley Trail, possibility of expanding Milwaukie's Riverfront park, and getting untreated spillage out of the Willamette River. The "big picture" of what is best for the region must be the County's decision.
37. needs to be completed without costing rate payers double; which is the projected fees. Also charging for usage (ex. elec. or water) not a flat fee which is not a fair system
38. As the norm, this survey is slanted to give results that the survey developers want, not what those taking the survey are really indicating
39. Make a decision this time and stick to it. Our community needs leaders not a group a critics who can stop a project but not stick to a solution. Good luck and thank you for taking on this challenge.
40. Seems like there should be a regional CAC that would pull together CCSD1, Tri-City SD, Oak Lodge, all the cities, and all the unincorporated Clackamas county folks. I don't get why the commissioners are going to now listen to the CCSD 1 CAC and move forward. What about the input from everyone else.
41. it is complicated survey... i dont understand those fancy terms.... it should be explained clearly and easy to read...
42. I assume that the postcards were sent to everyone in the district at some cost to the district. Yet when I looked for this survey, it was nearly impossible to find. I don't know if I could find it again if I had to. The cost of printing and sending these postcards for something that is apparently not important enough to be on the main web page was an absolute waste of my money, and I will keep that in mind during the next election.
43. So what is the trade-off on the property that Kellogg is sitting on? I'm sure the City would like it back, so what is the trade-off? After all, what started all this was the desire to use that land for other things, correct?
44. NEW CONSTRUCTION SHOULD BE RESPONSIBLE FOR MOST OF THE COST.
45. New construction should provide the entire cost of new or expanded facilities.
46. Forcing existing home owners to pay for growth is a huge, unfair burden that should be properly placed on the cost of new homes.
47. The county should look at the possibility of charging the developers for this service prior to building. The impact of all the new homes on both the services and school was not thought through. Start planning guys and don't just look at the requirements for the number of homes per lot etc.
48. As a citizen of Milwaukie, I am greatly upset about the shoddy and costly handling of the original Clearwater proposal: the underhanded scuttling of the costly project study, being left out of the CAC committee and finally, being denied even a voice in the mail in version. I have just completed this on line survey. It took me almost an hour of confusion to plow through it and I'm quite sure most citizens gave up long before the end.

49. Money is important - do not more of it from us!
50. I hope this organization looks at the big picture. There is nothing that should be political about sewer treatment. A regional view and processing that looks at long term costs and environmental stewardship is what is important. It should not be about a small group of individuals that think they are going to "lose control" of "their community". I hope they will think of the future of their children and not be selfish now.
51. I have never felt creating a shovel ready riverfront site at Kellogg at the expense of creating capacity for dozens of other desirable sites for development elsewhere was ever a good alternative
52. West Linn ratepayers should not underwrite any expanded wastewater treatment required by growth in Happy Valley, Damascus or as a result of the decommissioning of the Kellogg facility.
53. I am chagrined that only CCSD1 retail customers were notified about this survey. As a resident of Milwaukie, a wholesale customer of the district, I should have as much say (since I pay my sewer bills, too) as the people who live within the district. The CAC really only serves retail ratepayers, and they are only about a third of the districts total customers. This is a sham.
54. Think Long Term Sustainability and quality of life with all these decisions.
55. I just hope this is the final chapter in this saga that has gone on for far too long. And, I hope that the Commissioners understand that this expensive and lengthy process could and should have been avoided if they are just listened to what the majority said in the first place. We have studied and talked enough. It's time to move Kellogg.
56. The only weakness of this survey is this last page -- there should be an option to e-mail yourself the user ID. Few people are going to bother copying down such a long number!
57. This survey process is very interesting. I would like the County to consider using it for other larger issues, so that citizens can have a more active role in decision making. The Information button isn't working at the moment, for your information. Thursday, 4:40 PM.
58. This entire survey is indicative of a very weak, insecure leadership. The presentation on the website exhibits great skill in computer programming, a skill I wish I possessed. To me, it speaks loudly of a person, or persons attempting to justify their presence on a tax-funded pay roll. There is no question of the need of sewage and wastewater disposal, but it is not that complicated. Apply the KISS principle (keep it simple stupid). We do not need another bureaucracy.
59. Thank you for letting us express our somewhat limited generalized opinions on a very important part of our daily living. We are very much concerned that there aren't any statewide requirements that whether it pertains to new construction, maintenance, or refurbishing of the old existing facilities. The brunt of the costs should be the responsibility of contractors whose overbuilding has necessitated these very expensive changes (of course the same rules should pertain to roads, schools, property taxes, etc. If it's possible in other states, why not here. In our case here we have a "mayor" who should never have been put in office. We were not informed of his conflicts of interest being a contractors attorney with their hands in each other pockets. We native Oregonians

- feel like we've been sold down the river! Nobody was informed of these behind the counter "tricks" until it was too late. Thank you again for keeping us informed of a not at all small part of our district's decisions re: wastewater et al.
60. Keep the Kellogg Plant. It is at the low point, where it belongs. Pumping does not make sense. It will be a constant cost to maintain pumps and force main. It is better to upgrade the existing plant to eliminate the odor. That is what the people want.
 61. this issue about sewage needs to come to a final decision that benefits everyone equally and does not cost any one group more than another.
 62. Provided the CAC gets these comments... they need to consider what is going to be the best long-term solution for generations coming up. Consider that some of the Roman aqueducts are still in use today, 2000 years later. No doubt, with all of the "planned obsolescence" inherent in products today, that we could ever achieve that sort of longevity, but it might be a nice goal. Using finite resources, such as riverfronts, for this sort of plant is just plain wrong in view of the "densification" expected as time moves on and people move in, mostly without the benefit of backyards, [Truncated on Submit]
 63. Kellogg Plant was a mistake from the beginning. Along with the transit center, it has destroyed the downtown economy
 64. Yes, lets hope all the CAC members come to a consensus and recommend the A2 plan to the County Commissioners. This is the fairest and best plan for all ratepayers in CCSD#1 and let's pray that the commissioners follow the CAC's recommendation. Also the commissioners need to raise SDC fees very soon, before the building boom is over, and the homebuilders have pocketed the profits and left town. A large increase in SDC fees is imperative to help pay for all the sewer needs these new homes & businesses are creating, costs that established ratepayers should not have to pay. We have pa [Truncated on Submit]
 65. Maintain/expand Kellogg plant is a good idea it will serve its current area well. A new plant needs to be constructed to handle the growth areas happening in the county that will max out the Kellogg plant. Pumping sewage to tri-city plant is too expensive. Developers need to be held accountable for the cost to the district for expansion and new plant construction. It may be time to form a new district to shrink the boundaries of the Kellogg plant to a sustainable level and build a new treatment plant to allow for the expansion of the industrial base and the houses being built. The new district [Truncated on Submit]
 66. To me this survey looks slanted. I didn't see all the questions that in some way concluded what you say I said. When we voted on this last year or whenever, the people voted it down. We concluded that the two treatment plants had recently been brought up to speed and that they were fine and could handle our needs now and in the future. We spent a lot of money to refurbish them and that would all go to waste. We also concluded that there was about 6 mil. in reserves and that would maintain the systems for 15 to 20 years. We voted to leave things alone. Why is it that now someone wants to bring [Truncated on Submit]
 67. At this time, we don't believe that the Kellogg plant should be closed. The survey's pea-sized brain made a mistake! We do believe that the Kellogg plant should be: 1) kept, 2) maintained in very good condition, 3) upgraded to remove more pollution from the wastewater so that at least some of the wastewater can be re-used for non-potable purposes, 4) upgraded so that more waste gas is treated to reduce odor and/or recovered to generate electricity, and 5) possibly expanded to handle future, larger flows in a way that adds tennis courts, playground equipment, more walking paths, and [Truncated on Submit]
 68. It's time we look outside of the Milwaukie City Limits...Oak Grove must now realize that they need to be a team player in this. It's a shame so much time and money has been wasted on this

when Clearwater obviously was the right solution and that the Commissioners didn't have the courage to do what was right the first time.

69. Kellogg needs to go. It has outlived it's efficiency. Now is the time to get the sewer off of the river. Costs will not be any cheaper in the years to come.
70. Let the fools in Milwaukie pay to remove Kellogg!
71. What BS is this? My opinion is just the opposite. Read previous comments, Leave Kellogg open!!!
72. good luck!!!!
73. Close the Kellogg Treatment Plant already. It is an eyesore and a nosesore.
74. I believe that consolidating all wastewater treatment facilities in one tri-city location would benefit the entire region both environmentally and economically. Anything else would be silly!

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Appendix B: Text for Principles and Criteria Used in the Discovery Survey

PRINCIPLES:

Local Control

The Citizen Advisory Council values alternatives that preserve local control for the District and its customers.

Effects on District and Milwaukie Neighborhood

Wherever practicable, the Citizen Advisory Council is committed to reducing negative impacts and increasing benefits to District and Milwaukie neighborhoods. (Milwaukie lies outside the District boundaries, but it is a major wholesale customer.)

Links

http://www.co.clackamas.or.us/wes/meetings/Techmemo1_12_1.PDF See Map in Fig 1

Cost to Ratepayers and New Home Builder in the District and Milwaukie

The Citizen Advisory Council has two major concerns regarding rates and fees; keeping rates and fees low, and making sure that the distribution of rates and fees is fair. (Rates are paid by all customers and many fees are paid by new development.)

Effects on Other Jurisdictions

In comparing the alternatives, the effects, both positive and negative, on areas of the County outside of the District and Milwaukie are considered by the Citizens Advisory Council.

Mid-Term and Long-Term Costs

In analyzing the alternatives, the Citizen Advisory Council is considering all the mid (15 year)- and long-term (30 year) costs. (The short-term costs are uniform across the alternatives.) These also factor into the 'Rates and Fees' in the 'Effects District and Milwaukie' principle. These include all the costs: construction, operation, maintenance and other costs such as replacement costs.

Links

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Techmemo 2.5 Section 3.6 30-Year Plan Summary

Regional, Environmental and Economic Impacts

The Citizens Advisory Council is also considering the way each alternative affects regional environmental benefits and opportunity costs.

CRITERIA:

District Owns its Wastewater Treatment Plants

Ownership of the sewage/wastewater treatment plants would give the District a high degree of control.

Links

<http://www.co.clackamas.or.us/wes/meetings/FinalTechMemo22.pdf> Original Source - Section 2 Table 1 (PDF)

CAC has a Voice in Management and Implementation

Aside from ownership, other types of agreements could give the District a voice in implementation of the sewage/wastewater plant and management of the system.

District Meets Wastewater Capacity Needs within the District

If all of the District's sewage treatment needs are met by its own plant(s) and the plant(s) are located within the District, this would give a higher level of local control.

Links

http://www.co.clackamas.or.us/wes/meetings/DRAFTTM1_22_4.PDF DRAFT Technical Memorandums 1.2 Sec 4.2.3 Table 5

Effects of Plant on Residences and Neighborhood

Sewage/wastewater treatment plants can be designed to blend in with the rest of the neighborhood or nearby residences through its architectural features or added amenities. Some alternatives are likely to have less pressure from nearby neighborhoods, now and in the future. Also, some alternatives may have a higher potential for providing amenities.

Short-term Impacts of Plant/Pipeline Construction

In the short term, construction of the plant and pipelines will be disruptive, but depending on the neighborhood and the location of the plants, some alternatives may be more disruptive than others.

Links to maps of proposed pipe line construction.

http://www.co.clackamas.or.us/wes/meetings/Alternative_1.pdf A.1 Map 1

http://www.co.clackamas.or.us/wes/meetings/Alternative_2.pdf A.2 Map 2

http://www.co.clackamas.or.us/wes/meetings/Alternative_3.pdf B.1 Map 3

http://www.co.clackamas.or.us/wes/meetings/Alternative_4.pdf D.1 Map 4

http://www.co.clackamas.or.us/wes/meetings/Alternative_5.pdf D.2 Map 5

Growth to be Paid for by Growth

Even if there were no new growth, we would need to upgrade existing facilities to deal with normal wear and tear and new environmental requirements. This should be paid for by ratepayers. New capacity needs, related to new growth, should be paid for by newcomers. Some alternatives lend themselves more readily to separating these two factors.

Links

http://www.co.clackamas.or.us/wes/meetings/DRAFTTM1_22_4.PDF Tech Memo 2.3 Section 1.3 - Environmental Requirements Not Online Yet - Minutes of August 21st 2006

Rates and Fees

Alternatives are preferred if they are less expensive, they raise rates and fees more gradually and they defer increases as long as possible. (The HDR analysis of rates and fees is due September 14th; the ratings in this survey are gross estimates.)

Effects of Plant on Residences and Neighborhood

Sewage/wastewater treatment plants can be designed to blend in with the rest of the neighborhood or nearby residences through its architectural features or added amenities. Some alternatives are likely to have less pressure from nearby neighborhoods, now and in the future. Also, some alternatives may have a higher potential for providing amenities.

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In the short term, construction of the plant and pipelines will be disruptive, but depending on the neighborhood and the location of the plants, some alternatives may be more disruptive than others.

Links to maps of proposed pipe line construction.

http://www.co.clackamas.or.us/wes/meetings/Alternative_1.pdf A.1 Map 1

http://www.co.clackamas.or.us/wes/meetings/Alternative_2.pdf A.2 Map 2

http://www.co.clackamas.or.us/wes/meetings/Alternative_3.pdf B.1 Map 3

http://www.co.clackamas.or.us/wes/meetings/Alternative_4.pdf D.1 Map 4

http://www.co.clackamas.or.us/wes/meetings/Alternative_5.pdf D.2 Map 5

Financial Impacts

District solutions may create opportunities for efficiencies (e.g., at Tri-City) or for better access and re-use (e.g., at Sunrise Water).

Links

<http://www.sunrisewater.com> See Sunrise Water District

Construction Costs

Costs associated with building new facilities or improving or expanding existing facilities (i.e. capital costs).

Links

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Draft Task 2.5 & 2.6

Lifecycle Costs

Long-term costs associated with an option that includes both capital construction and ongoing operation and maintenance.

Planning Flexibility and Timing

Some alternatives would give the District greater flexibility to adapt to new conditions, giving the ability to 'mix and match' elements to meet various needs. For instance, maintaining outfalls would tend to increase management flexibility.

Constructability

Some alternatives provide for greater ease and timeliness of implementation in terms of design, permitting, and construction. Unique technology selection, poor construction conditions, or difficult permitting conditions may delay implementation.

Links

http://www.co.clackamas.or.us/wes/meetings/kellogg_alt1-2.pdf Kellogg Liquid Train

http://www.co.clackamas.or.us/wes/meetings/tri-cities_alt3st.pdf Tri-City Alternative 3 Solids Train

http://www.co.clackamas.or.us/wes/meetings/tri-cities_alt3lt.pdf Tri-City Alternative 3 Liquids Train

Economic Durability

Some alternatives may have greater potential for economic durability than others, making them more favorable. For instance, plants situated in an area with few other economic prospects are less likely to come under economic pressure. Conversely, a need for additional industrial land could create pressure to move the plant at a later date.

Political Durability

Some alternatives may have greater potential for political and social durability than others, making them more favorable. Alternatives that coincide with local community vision would be less likely to come under political pressure.

Potential to Create an Environmental Benefit

Some siting choices present greater potential for providing environmental benefit, such as reuse, location of the outfall, etc. ("Reuse" means using highly-treated wastewater for limited purposes such as irrigation.)

Opportunity Costs

The relative financial benefit (with wastewater treatment and without wastewater treatment) is considered for each site; it is preferable to site the sewage/wastewater treatment plant where there are low opportunity costs.

WASTEWATER PLANS:

A1 Maintain Kellogg, Send Excess flow to Tri-City

Under this alternative, Kellogg would be preserved under a de-rated state (i.e. assumed 4.8 mgd) to meet the ammonia limits established under the plant's new discharge permit and all remaining capacity needs (11.8 mgd) would be conveyed and treated at the Tri-Cities plant. Remedies at Kellogg would be limited to using the existing major infrastructure (such as clarifiers, basins, etc.) without substantial capital modifications.

Links to Plant Improvement Schematic

http://www.co.clackamas.or.us/wes/meetings/A4FStudy_3.pdf Let's Talk Sewage

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Section 2 Alternatives Overview

http://www.co.clackamas.or.us/wes/meetings/kellogg_alt1-2.pdf Kellogg Liquid Train

A2 Maintain Kellogg, Send Excess flow to New Plant

The same conditions as those defined under Alternative 1 with the exception that all future flows (11.8 mgd) would be sent to a new conventional-type plant to be situated on 30 acres along the industrial corridor south of Highway 212/224. For purposes of this study, it is assumed that this location sits adjacent (east) to the existing Fred Meyers warehouse.

Links to Plant Improvement Schematic

http://www.co.clackamas.or.us/wes/meetings/A4FStudy_3.pdf Let's Talk Sewage

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Section 2 Alternatives Overview

http://www.co.clackamas.or.us/wes/meetings/kellogg_alt1-2.pdf Kellogg Liquid Train

B1 Expand Kellogg, Send Excess flow to Tri-City

Under this option, Kellogg would be rehabilitated using new treatment technology such as high-rate clarifiers or membrane bio-reactors to achieve a treatment capacity on the existing plant's footprint that would serve 12.5 mgd (i.e. the estimated capacity of the existing conveyance system) with the residual future flow (4.5 mgd) to be sent to the Tri-Cities plant.

Links to Plant Improvement Schematic

http://www.co.clackamas.or.us/wes/meetings/A4FStudy_3.pdf Let's Talk Sewage

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Section 2 Alternatives Overview

http://www.co.clackamas.or.us/wes/meetings/kellogg_alt1-2.pdf Kellogg Liquid Train

http://www.co.clackamas.or.us/wes/meetings/tri-cities_alt3st.pdf Tri-City Alternative 3 Solids Train

http://www.co.clackamas.or.us/wes/meetings/tri-cities_alt3lt.pdf Tri-City Alternative 3 Liquids Train

D1 Send All Flows to Tri-City, Close Kellogg

The focus of this option would be to transition the flows (ultimately 16.6 mgd) over the next 5-10 years to Tri-Cities and decommission the existing Kellogg facility.

Links

http://www.co.clackamas.or.us/wes/meetings/A4FStudy_3.pdf Let's Talk Sewage

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Section 2 Alternatives Overview

D2 Build New Plant, Close Kellogg

Similar to Alternative 4 in its plan to decommission Kellogg, this option would transition the flows (ultimately 16.6 mgd) over the next 5-10 years to a new plant situated on 30 acres along the industrial corridor south of Highway 212/224 (as described in Alternative 1).

Links

http://www.co.clackamas.or.us/wes/meetings/A4FStudy_3.pdf Let's Talk Sewage

http://www.co.clackamas.or.us/wes/meetings/2.5_2.6_draft.pdf Section 2 Alternatives Overview

End of Appendix B

Appendix C: Screenshots of the Online Survey

C1: The Welcome web page



The “more” buttons provide background notes information and hyperlinks to WES web assets.

C2: Your Neighborhood web page

Service District #1

The map to the right shows the area in North Clackamas County that is served by Clackamas County Service District No. 1 (CCSD#1). You can view a larger map of the District by clicking on CCSD#1.

You can refer to the map to answer the following questions.

I am responding to this survey primarily as:

- A residential rate payer of CCSD#1
- A business rate payer of CCSD#1
- I am not a rate payer of CCSD#1

Your Residence

My residence is located inside the city limits of the:

Not a resident of North Clackamas County

My residential zip code is: Not Resident

Your Business

My business is located inside the city limits of the:

Not a business owner in North Clackamas County

My Business zip code is: No Business Zip

Continue: Input Your Values >>

Your Neighborhood

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C3: Values for principles page

Water Environment Services
A Department of Clackamas County *Let's Talk Sewage!*

1: Welcome | 2: Your Neighborhood | **Step 3: Your Values** | 4: Your Results | (Opt) See Why | 5: Finish/Comments

Your Values

The Citizen Advisory Council defined the following guiding principles to consider for selecting a strategic wastewater treatment plan.

- For more information about a principle, click the information button **i** next to it.
- To see how these principles fit in the over all approach, [click here](#) to launch the Document Map.

Consider how important each principle is to you and weight it accordingly.

Local Control i	Important
Effects on District and Milwaukie Neighborhood i	Important
Cost to Ratepayers and New Home Builders in the District and Milwaukie i	Important
Effects on Other Jurisdictions i	Important
Mid-Term and Long Term Costs i	Important
Regional, Environmental and Economic Impacts i	Important

(Optional) Share comments about the principles listed above:

Click Continue to move to the next Values input page.

C4: DocumentMap (reached by clicking [click here](#) hyperlink on previous page)

Let's Talk Sewage! - WES Waste Water Decision Document Map

Goal Level	Principles	Criteria
Select Plan	Effects on District and Milwaukie Neighborhood	Short-term Impacts of Plant/Pipeline Construction
	Cost to Ratepayers and New Home Builder in D and M	Effects of Plant on Residences and Neighborhood
	Local Control	Rates and Fees
	Mid-Term and Long Term Costs	Growth to be Paid for by Growth
	Regional and Economic Impacts	District Owns its Wastewater Treatment Plants
	Effects on Other Jurisdictions	CAC has a Voice in Management and Implementation
		District Meets Wastewater Capacity Needs w/in Dist
		Economic Durability
		Constructability
		Planning Flexibility and Timing
		Construction Costs
		Lifecycle Costs
		Political Durability
		Potential to Create an Environmental Benefit
		Opportunity Costs
		Effects of Plant on Residences and Neighborhood
		Financial Impacts
		Short-term Impacts of Plant/Pipeline Construction

Close Browser

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Note: This web page appears in a new browser window.

C5: Values – Criteria for principle [Local Control]

1:Welcome 2:Your Neighborhood **Step 3:Your Values** 4:Your Results (Opt) See Why 5:Finish/Comments

Local Control

For each of the guiding principles, the Citizen Advisory Council developed criteria. These criteria are used for reviewing and assessing the different alternatives/plans. They serve as a measurable element in assessing the alignment of an alternative/plan with respect to the specified principles (e.g. - technical, financial, social, political values, etc.).

- For more information about a criterion, click the information button **i** next to it.
- To see how these criteria fit in the over all approach, [click here](#) to launch the Document Map.

With respect to the principle **Local Control** **i**, consider how important each criterion is to you and rate it accordingly.

District Owns its Wastewater Treatment Plants **i**

CAC has a Voice in Management and Implementation **i**

District Meets Wastewater Capacity Needs w/in Dist **i**

(Optional) Share comments about criteria listed above for **Local Control**:

<< Previous Continue >>

C6: Values – Criteria for principle [Effects on District and Milwaukie Neighborhood]

The screenshot shows a web browser window with a teal header. The header contains the logo for 'WATER ENVIRONMENT SERVICES' and the text 'Let's Talk Sewage!'. Below the header is a navigation bar with six buttons: '1:Welcome', '2:Your Neighborhood', 'Step 3:Your Values', '4:Your Results', '(Opt) See Why', and '5:Finish/Comments'. The main content area is titled 'Effects on District and Milwaukie Neighborhood'. It contains a paragraph explaining the purpose of the criteria, followed by two bullet points. Below this is a paragraph asking the user to rate the importance of each criterion. Two criteria are listed with dropdown menus set to 'Important': 'Effects of Plant on Residences and Neighborhood' and 'Short-term Impacts of Plant/Pipeline Construction'. There is a text input field for optional comments. At the bottom of the form are two buttons: '<< Previous' and 'Continue >>'. A progress bar is visible at the bottom of the page. The footer contains links to 'Clackamas County', 'Water Environment Services', 'Citizen Advisory Council', and 'Public Involvement Process'.

WATER ENVIRONMENT SERVICES
A Department of Clackamas County

Let's Talk Sewage!

1:Welcome 2:Your Neighborhood Step 3:Your Values 4:Your Results (Opt) See Why 5:Finish/Comments

Effects on District and Milwaukie Neighborhood

For each of the guiding principles, the Citizen Advisory Council developed criteria. These criteria are used for reviewing and assessing the different alternatives/plans. They serve as a measurable element in assessing the alignment of an alternative/plan with respect to the specified principles (e.g. - technical, financial, social, political values, etc.).

- For more information about a criterion, click the information button **i** next to it.
- To see how these criteria fit in the over all approach, [click here](#) to launch the Document Map.

With respect to the principle **Effects on District and Milwaukie Neighborhood** **i**, consider how important each criterion is to you and rate it accordingly.

Effects of Plant on Residences and Neighborhood **i** Important

Short-term Impacts of Plant/Pipeline Construction **i** Important

(Optional) Share comments about criteria listed above for **Effects on District and Milwaukie Neighborhood**:

<< Previous Continue >>

Links: [Clackamas County](#) | [Water Environment Services](#) | [Citizen Advisory Council](#) | [Public Involvement Process](#)

C7: Values – Criteria for principle [Cost to Ratepayers and New Home Builders in the District and Milwaukie]

The screenshot shows a web browser window with a navigation bar at the top. The navigation bar includes a logo for 'WATER ENVIRONMENT SERVICES' and the slogan 'Let's Talk Sewage!'. Below the logo, there is a progress indicator with five steps: '1: Welcome', '2: Your Neighborhood', 'Step 3: Your Values', '4: Your Results', '(Opt) See Why', and '5: Finish/Comments'. The main content area is titled 'Cost to Ratepayers and New Home Builders in the District and Milwaukie'. It contains a paragraph explaining the purpose of the criteria, a list of instructions, and a section for rating criteria. The 'Growth to be Paid for by Growth' criterion is rated 'Important', and the 'Rates and Fees' criterion is also rated 'Important'. There is a text input field for optional comments and a progress bar at the bottom of the page.

1: Welcome 2: Your Neighborhood **Step 3: Your Values** 4: Your Results (Opt) See Why 5: Finish/Comments

Cost to Ratepayers and New Home Builders in the District and Milwaukie

For each of the guiding principles, the Citizen Advisory Council developed criteria. These criteria are used for reviewing and assessing the different alternatives/plans. They serve as a measurable element in assessing the alignment of an alternative/plan with respect to the specified principles (e.g. - technical, financial, social, political values, etc.).

- For more information about a criterion, click the information button **i** next to it.
- To see how these criteria fit in the over all approach, [click here](#) to launch the Document Map.

With respect to the principle **Cost to Ratepayers and New Home Builders in the District and Milwaukie** **i**, consider how important each criterion is to you and rate it accordingly.

Growth to be Paid for by Growth **i** Important

Rates and Fees **i** Important

(Optional) Share comments about criteria listed above for **Cost to Ratepayers and New Home Builders in the District and Milwaukie**:

<< Previous Continue >>

Links: [Clackamas County](#) | [Water Environment Services](#) | [Citizen Advisory Council](#) | [Public Involvement Process](#)

C8: Values – Criteria for principle [Effects on Other Jurisdictions]

The screenshot shows a web browser window with a teal header for 'WATER ENVIRONMENT SERVICES' and the slogan 'Let's Talk Sewage!'. Below the header is a navigation bar with six steps: 1:Welcome, 2:Your Neighborhood, Step 3:Your Values (highlighted), 4:Your Results, (Opt) See Why, and 5:Finish/Comments. The main content area is titled 'Effects on Other Jurisdictions' and contains an introductory paragraph, a bulleted list of instructions, a paragraph about rating criteria, and three dropdown menus for rating 'Effects of Plant on Residences and Neighborhood', 'Short-term Impacts of Plant/Pipeline Construction', and 'Financial Impacts'. Below these is an optional comment box and navigation buttons for '<< Previous' and 'Continue >>'. A progress bar is visible at the bottom of the page.

Effects on Other Jurisdictions

For each of the guiding principles, the Citizen Advisory Council developed criteria. These criteria are used for reviewing and assessing the different alternatives/plans. They serve as a measurable element in assessing the alignment of an alternative/plan with respect to the specified principles (e.g. - technical, financial, social, political values, etc.).

- For more information about a criterion, click the information button **i** next to it.
- To see how these criteria fit in the overall approach, [click here](#) to launch the Document Map.

With respect to the principle **Effects on Other Jurisdictions** **i**, consider how important each criterion is to you and rate it accordingly.

Effects of Plant on Residences and Neighborhood **i**

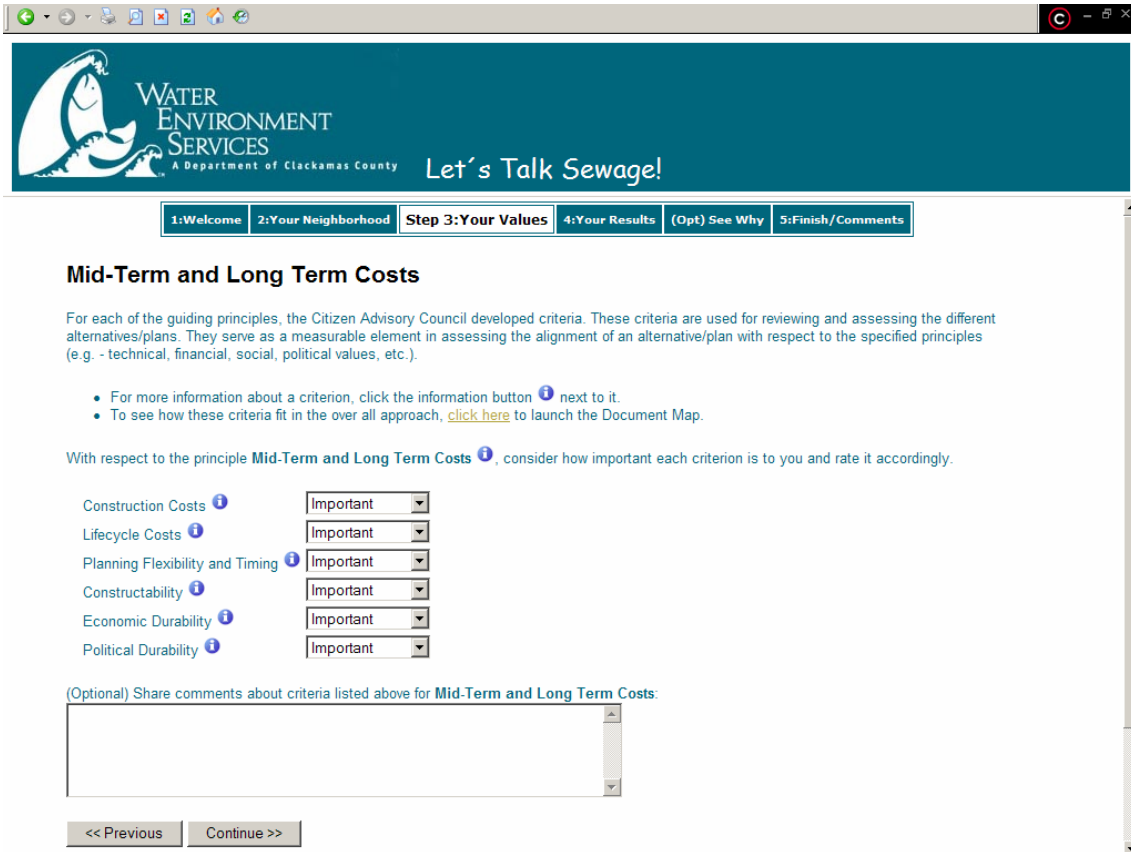
Short-term Impacts of Plant/Pipeline Construction **i**

Financial Impacts **i**

(Optional) Share comments about criteria listed above for **Effects on Other Jurisdictions**:

<< Previous Continue >>

C9: Values – Criteria for principle [Mid-Term and Long Term Costs]



The screenshot shows a web browser window with a teal header for 'WATER ENVIRONMENT SERVICES A Department of Clackamas County' and the slogan 'Let's Talk Sewage!'. A navigation bar contains five buttons: '1: Welcome', '2: Your Neighborhood', 'Step 3: Your Values', '4: Your Results', and '(Opt) See Why', followed by '5: Finish/Comments'. The main content area is titled 'Mid-Term and Long Term Costs' and contains an introductory paragraph, a bulleted list of instructions, a paragraph about rating criteria, a list of six criteria with dropdown menus set to 'Important', an optional comment box, and two navigation buttons: '<< Previous' and 'Continue >>'.

Mid-Term and Long Term Costs

For each of the guiding principles, the Citizen Advisory Council developed criteria. These criteria are used for reviewing and assessing the different alternatives/plans. They serve as a measurable element in assessing the alignment of an alternative/plan with respect to the specified principles (e.g. - technical, financial, social, political values, etc.).

- For more information about a criterion, click the information button **i** next to it.
- To see how these criteria fit in the over all approach, [click here](#) to launch the Document Map.

With respect to the principle **Mid-Term and Long Term Costs** **i**, consider how important each criterion is to you and rate it accordingly.

Construction Costs i	Important
Lifecycle Costs i	Important
Planning Flexibility and Timing i	Important
Constructability i	Important
Economic Durability i	Important
Political Durability i	Important

(Optional) Share comments about criteria listed above for **Mid-Term and Long Term Costs**:

<< Previous Continue >>

C10: Values – Criteria for principle [Regional, Environmental and Economic Impacts]

WATER ENVIRONMENT SERVICES
A Department of Clackamas County

Let's Talk Sewage!

1:Welcome 2:Your Neighborhood **Step 3:Your Values** 4:Your Results (Opt) See Why 5:Finish/Comments

Regional, Environmental and Economic Impacts

For each of the guiding principles, the Citizen Advisory Council developed criteria. These criteria are used for reviewing and assessing the different alternatives/plans. They serve as a measurable element in assessing the alignment of an alternative/plan with respect to the specified principles (e.g. - technical, financial, social, political values, etc.).

- For more information about a criterion, click the information button **i** next to it.
- To see how these criteria fit in the over all approach, [click here](#) to launch the Document Map.

With respect to the principle **Regional, Environmental and Economic Impacts** **i**, consider how important each criterion is to you and rate it accordingly.

Potential to Create an Environmental Benefit **i**

Opportunity Costs **i**

(Optional) Share comments about criteria listed above for **Regional, Environmental and Economic Impacts**.

<< Previous Continue: Results >>

Links: [Clackamas County](#) | [Water Environment Services](#) | [Citizen Advisory Council](#) | [Public Involvement Process](#)

C11: Your Results – Shows how well each alternative fits the survey taker’s values

1:Welcome **2:Your Neighborhood** **3:Your Values** **Step 4:Your Results** (Opt) See Why **5:Finish/Comments**

Your Results

Thank you for sharing your values and comments. The alternative that most closely aligns with your values and the CAC preliminary ratings is **D2 Build New Plant, Close Kellogg**. You can see how all the alternatives align in the table below.

Done enough? Click the Finish link to complete the survey process.

- [Finish up \(and chance for one last comment\)](#)

Interested in digging deeper? Explore why you got the results you did.

- [See why the results come out as they do](#)
- [Take a look at the CAC preliminary ratings](#)
- [Go back and reconsider the values you entered](#)

Wastewater Plans	How well do these alternatives match your values?	
D2 Build New Plant, Close Kellogg	57%	<div style="width: 57%;"></div>
A2 Maintain Kellogg, Send Excess flow to New Plant	55%	<div style="width: 55%;"></div>
A1 Maintain Kellogg, Send Excess flow to Tri-City	47%	<div style="width: 47%;"></div>
B1 Expand Kellogg, Send Excess flow to Tri-City	47%	<div style="width: 47%;"></div>
D1 Send All Flows to Tri-City, Close Kellogg	46%	<div style="width: 46%;"></div>

If you are satisfied with the results of your survey, please click Finish/Comments to complete the survey process. If you are interested in seeing why your responses generated the results above, click See Why. If you want to go back and modify your responses, click Reconsider Your Values.

<< Reconsider Your Values Review CAC Preliminary Ratings See Why Finish/Comments >>

Links: [Clackamas County](#) | [Water Environment Services](#) | [Citizen Advisory Council](#) | [Public Involvement Process](#)

Navigation

- **Return to the Values input web pages C3-C10**
- **Review CAC Preliminary Ratings C13**
- **See Why Page C12**
- **Finish/Comments C14**

C12-A: See Why web page – explains Best Fit results for all alternatives

Wastewater Plan Selection - See Why

Why is D2 Build New Plant, Close Kellogg the Wastewater Plan that best fits your values?

'D2 Build New Plant, Close Kellogg' receives the highest decision score of 57%

- [D2 Build New Plant, Close Kellogg] scored higher in 'Regional, Environmental and Economic Impacts' (8%)
- [D2 Build New Plant, Close Kellogg] scored higher in 'Effects on District and Milwaukie Neighborhood' (2%)
- [D2 Build New Plant, Close Kellogg] scored higher in 'Local Control' (1%)
- [A2 Maintain Kellogg, Send Excess flow to New Plant] scored higher in 'Cost to Ratepayers and New Home Builder in D and M' (4%)
- [A2 Maintain Kellogg, Send Excess flow to New Plant] scored higher in 'Mid-Term and Long Term Costs' (3%)
- [A2 Maintain Kellogg, Send Excess flow to New Plant] scored higher in 'Effects on Other Jurisdictions' (3%)

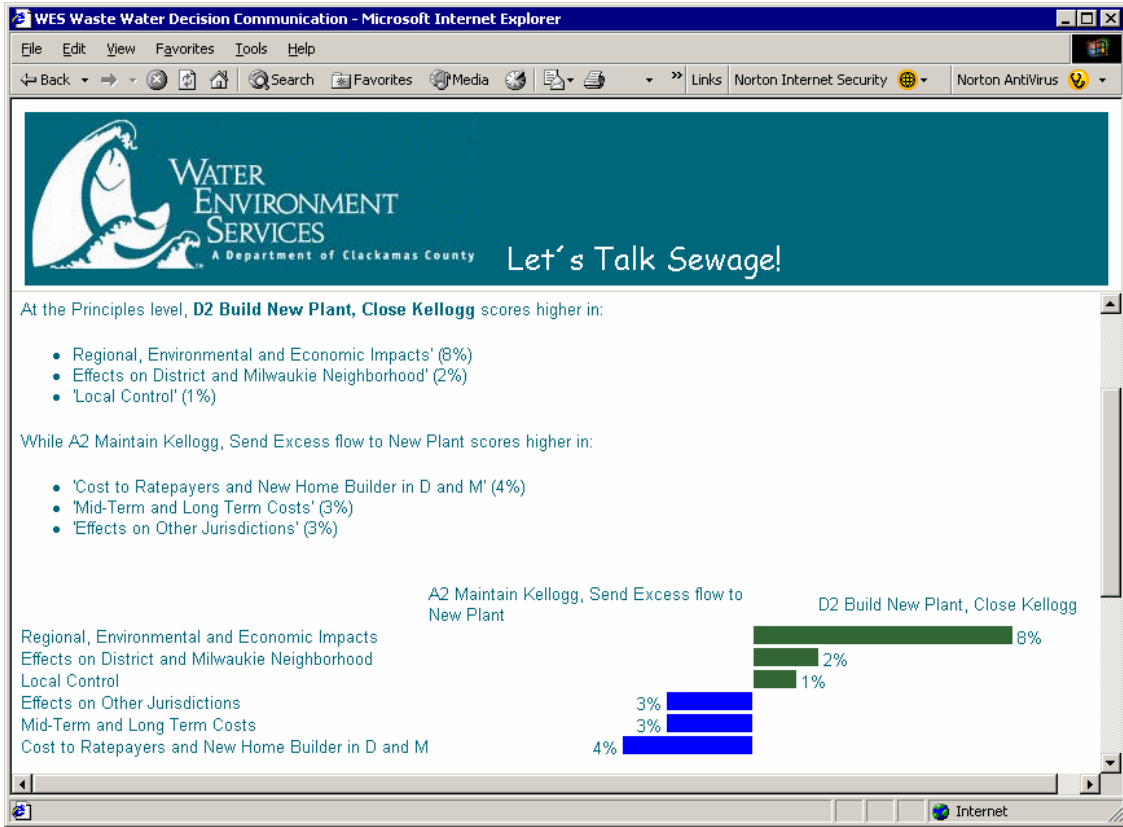
Wastewater Plans	How well these match your values	Values
D2 Build New Plant, Close Kellogg		57%
A2 Maintain Kellogg, Send Excess flow to New Plant		55%
A1 Maintain Kellogg, Send Excess flow to Tri-City		47%
B1 Expand Kellogg, Send Excess flow to Tri-City		47%
D1 Send All Flows to Tri-City, Close Kellogg		46%

■ Effects on District and Milwaukie Neighborhood ■ Mid-Term and Long Term Costs
■ Cost to Ratepayers and New Home Builder in D and M ■ Regional, Environmental and Economic Impacts
■ Local Control ■ Effects on Other Jurisdictions

Underlying Ratings
 The contributions you see above are calculated based on a combination of your values and how the Citizens Advisory Council rated each Wastewater Plan. To see the CAC's Preliminary Ratings for the Wastewater Plans, [click here](#).

If you would like to compare the top two Wastewater Plans head-to-head to see how they perform with respect to the values you assigned to the Principles and Criteria, click the "Compare Top Two Wastewater Plan" button below.

C12-B: See Why web page – compare top fitting alternatives head-to-head



C13: CAC Preliminary Ratings web page – how CAC rated alternatives against criteria

Wastewater Plans	A1 Maintain Kellogg, Send Excess flow to Tri-City	A2 Maintain Kellogg, Send Excess flow to New Plant	B1 Expand Kellogg, Send Excess flow to Tri-City	D1 Send All Flows to Tri-City, Close Kellogg	D2 Build New Plant, Close Kellogg
District Owns its Wastewater Treatment Plants	-	++	+	--	++
CAC has a Voice in Management and Implementation	-	++	+	--	++
District Meets Wastewater Capacity Needs w/in Dist	-	+	0	--	++
Effects of Plant on Residences and Neighborhood (District & Milwaukee)	0	0	-	++	+
Short-term Impacts of Plant/Pipeline Construction (District & Milwaukee)	0	-	-	++	-
Growth to be Paid for by Growth	0	0	0	0	-
Rates and Fees	+	-	+	-	--
Effects of Plant on Residences and Neighborhood (A=Other Jurisdictions)	-	++	-	--	0
Short-term Impacts of Plant/Pipeline Construction (A=Other Jurisdictions)	-	++	-	--	++
Financial Impacts	+	-	+	++	-
Construction Costs	+	+	--	++	0
Lifecycle Costs	+	-	0	+	-
Planning Flexibility and Timing	+	++	++	-	-
Constructability	++	+	+	--	-
Economic Durability	+	+	+	-	+
Political Durability	--	-	--	-	+
Potential to Create an Environmental Benefit	-	-	-	0	++

Note: This web page opens up in a new browser window

C14: The Finish web page – option of posting an overall comment

1:Welcome **2:Your Neighborhood** **3:Your Values** **4:Your Results** **(Opt) See Why** **Step 5:Finish/Comments**

Thank You!

Thank you for completing the "Let's Talk Sewage" Public Opinion Survey. Your survey has been saved. If you have further comments you would like to add please do so in the comments box at the bottom of the page and then click Finish.

Please note that this is a Public Opinion Survey. It is NOT a Voting Method!"

You may revisit this site at any time before midnight **Sunday, September 10th, 2006** to change your responses or comments. Only your most recent responses will be used in the final tally.

You must have your User ID to re-enter the survey! This is the only time it will be provided to you, so please copy it down, or save it electronically.

Your User ID:

You may be able email it to yourself by [clicking here](#). This requires a mail client (such as MS Outlook) on the computer you are currently using that is able to send emails. *InfoHarvest will have no record of your email.*

When you return, enter this UserID in the slot on the lower left of the Welcome page (as shown in the screen shot on the right) and click the Start button.

The Public Opinion Survey data will be collected and compiled by a third party ([InfoHarvest](#)) and the results will be posted on the WES ("Let's Talk Sewage") website on **Monday, September 25th, 2006**.

Is there anything else you would like to share about this issue? Please provide your comments below, then Click Finish to save them.

Note: This is where survey taker had the option to copy or email to themselves a User ID with which they could re-enter their survey again later

End of Appendix