

- > The Tualatin is a slow-moving river and one of the most polluted in the state.
- > The Tualatin is 83 miles long and drains a 720 square acre water shed.
- > Flows change seasonally and vary along the river's course. There are healthy fish runs at Cherry Grove, but turbidity and algae growth increase in the Portland-metro area as the river flow slows and the volume of pollutants pumped into the river increases.
- > The best way to deal with problem is to keep pollutants from entering the water shed.
- > Wastewater from treatment plants accounts for 85 percent of phosphorous in the river.
- > Runoff from storm drains goes directly to creeks and eventually to the Tualatin. This runoff includes phosphorous fertilizers and detergents.
- > The Tualatin must meet new pollution standards by 1995.
- > The USA plan is designed to solve problems on the theory that water used once is wasted and water used twice is saved.
- > Recycled water can be used for irrigation and wastewater sludge is used for fertilizer.

TAPE 42, SIDE B

- > Experiments are being conducted to see if wetlands can filter wastewata naturally. > Surface Water Management Plan designed to help solve runoff and sewage problems

35 > To reduce pollution entering the Tualatin, humans can: use phosphate-free detergents, keep compost away from sewage drains, not pour hazardous waste into sewer, conserve water. 84 JACKSON: The pollution problem in the Tualatin is nutrients; it is not typically toxic or volatile. The Tualatin is not a health issue. 100 JACKSON: Reviews costs for clean-up and management plan. (EXHIBIT B) > Don't have plans in place to deal with urban runoff and don't have estimate of how much it could cost to manage. > USA's efforts to meet wastewater requirements are on schedule. > USA will spend \$150 million by June 1993 to deal with phosphorous problem. 127 REP. VAN LEEUWEN: Which is greater, state or federal requirements imposed on USA? 132 JACKSON: We must comply with federal requirements, but the actual levels of pollutants that we must achieve are prescribed by the state. Oregon has the toughest phosphorous and load requirements in the country. House Committee on Enviro ~ent and Energy February 1S, 1991- Page 4

145 REP. NAITO: The Senate is considering a bill that would make water reduction devices mandatory. Would that kind of measure contribute to this clean-up effort in terms of reducing the volume of water that needs to be treated?

152 JACKSON: We have looked at conservation, but conservation only limits the volume of water returned to the Tualatin, not what's in the water.

156 CHAIR PARKINSON: Are the costs you have given us tied into hookup

fees for new homes?

160 JACKSON: Yes. A new homeowner would be looking at a \$2,500 sanitary sewage fee plus the urban surface water hookup fee.

169 CHAIR PARKINSON: "Looks like that will help solve the growth problems in Washington County." 170 JACKSON: The Legislature should consider extending the metro-Portland phosphorous ban to the rest of the state. One other thing. Irrigators are concerned about losing their water rights because of pollution-control regulations. SB 204 begins to address this issue, as well as down stream water rights. 200 REP. NORRIS: Are we looking at a \$1,875 up-front service-connection fee today?

206 JACKSON: Yes.

210 REP. NORRIS: This is not part of this bill, but earlier somebody mentioned water conservation facilities. Do you feel that restricted volumes of water would carry the solid flow that the typical sewage system is going to need?

214 BILL GAFFE, UNITED SEWERAGE AGENCY: It's my understanding that similar laws have been implemented in other states without significant operation or maintenance problems.

223 REP. COURTNEY: You don't have any recommendations on storm drainage. Do you still allow storm drainage to go directly into the river?

232 JACKSON: Yes, but we are currently addressing storm drainage through several efforts, including public information, street sweeping, catch basin clean-outs, etc.

237 REP. CLARK: Outlines physical, political and public policy issues involved in clean-up of the Tualatin.

> Clean-up prompted by two federal law suits.

> Proposed plan is aimed mostly at controlling-point source problems.

> Could spend half a billion dollars to get a river that's "a little less green".

> Many of the pollution issues associated with the Tualatin come up again and again with rivers throughout Oregon. House Committee on Environment and Energy February 15, 1991- P4e 5

> USA can't afford to let up now; it is basically under court order to attempt to succeed.

325 REP. WHITTY: Is there any kind of community effort to reduce human runoff from washing cars, etc.?

337 REP. CLARK: Yes. There is some aggressive community involvement, but that may not work. Somebody has to ask if the court orders on the Tualatin need to be reexamined.

362 REP. NORRIS: You're saying that there is credible historic evidence that this river was not pristine in the beginning?

369 REP. CLARK: I wouldn't say credible, but that hypothesis has been

presented.

383 REP. COURTNEY: What would be a clean Tualatin river to you?

388 REP. CLARK: That question has not been asked in the deeper sense that you're asking it. The Tualatin has always been used as a kind of catch basin. This means you have to bring a practical perspective to discussions about cleaning up the Tualatin. Dollars need to be spent in the most cost-effective way. The current plan may not be cost effective.

TAPE 41, SIDE B

15 REP. COURTNEY: Can you give me a feel if the clean-up proposal will make the Tualatin "swimmable" end efishable"? 20 REP. CLARK: Swimmable and fishable certainly are realistic goals. "Whether you would ever be able to bob up and down in the Tualatin and see your toes - I don't know 23 REP. COURTNEY: Have there been any studies to determine damage to fish stocks in the Tualatin? 25 REP. CLARK: Yes. Damage to the fish and wildlife community on the river has been "substantial". 27 REP. COURTNEY: And it's not swimmable? 29 REP. CLARK: "Most of the time, Rep. Courtney, you do not want to swim in that river." 30 REP. JONES: The issues with clean up of the Tualatin are two-fold: 1.) whether the river is clean to the eye or to DEQ's specifications; and 2.) if the lawsuit requirements will yield a "clean" river that still looks bad to the public, is the proposed clean up a worthwhile use of public money? 50 REP. VAN LEEUWEN: Why can't added water storage be used to increase the quantity and quality of the river? 57 REP. CLARK: That has been done at least once in the past. There is discussion about building another dam, a reservoir and more re-use. If we don't address fundamental problems now, February 15, 1991- Page 6

however, we will be back where we started in 10 to 15 years.

72 REP. VAN LEEUWEN: I see no excuse for not storing more of the excess water that we seem to have in such abundance. 83 REP. CLARK: I don't disagree with what you're saying. 86 REP. JONES: Discussions about a dam have been going on for a long time, but this is a huge coordinating problem. 97 REP. VAN LEEUWEN: Maybe it's time that urban dwellers realize that they can't have their cake and eat it too. 99 REP. CLARK: There are 27 governments trying to manage this river with no clear leadership. We need legislative leadership. 108 REP. NORRIS: If I may comment, as chair of the Water Policy Committee, the issue of water storage has been statutorily ambivalent. I hope we will talk much more about this. 128 WESLEY JARRELL, OREGON GRADUATE INSTITUTE: Explains water runoff flowchart. (EXHIBIT C) > Blocks on first bar graph are from Tualatin samples taken from Jackson Bottom, a drained wetland that has been mostly pasture and dry crops. > Samples do not necessarily reflect immediate surface activities like farming because phosphates tend to migrate and collect. > OGI study results are very preliminary. Future studies need to identify general and pervasive patterns. > Tainted soils do not necessarily have a direct negative impact on the river, but their presence indicates such soils could have an impact if their harmful components are mobilized. 330 REP. JONES: You have indicated that the land near your campus in Washington County has high phosphorous concentrations. How has that land been used historically? 339 JARRELL: It has been at least 60 years since that area has been farmed using fertilizer. 350 ANTONIO BAPTISTA, OREGON GRADUATE INSTITUTE: Summarizes OGI modeling . and research projects. (EXHIBIT D)

TAPE 42, SIDE B

10 BAPIISTA: Shows video illustrating movement of chemicals within water shed. Tides and flows throughout the water shed influence dispersion of water-born pollutants.

111 REP. COURTNEY: You have ammonia and phosphorous nutrients that cause algae to build up. February 15, 1991- Page 7

When the algae dies, it creates the stench, lack of oxygen, problems for fish and poor aesthetics. Is that correct?

116 JARRELL: The ammonia is having a direct affect on the amount of oxygen that is dissolved in the water. That reduces the ability of the water to sustain organisms. The phosphorous is encouraging prolific growth of the algae, and when the algae die and decompose, they have basically the same effect as the ammonia.

123 REP. COURTNEY: So even if you were to solve the algae problem, you would still have a significant problem?

130 JARRELL: The algae problem is the primary focus. The control of phosphorous is the means.

134 REP. COURTNEY: I'm struggling with exactly what's trying to be done here. Will the Tualatin be a "clean rher" if we get rid of the algae?

143 JARRELL: I think that's a decision that society makes. I don't think we can measure absolutely clean or dirty, especially for a nutrient like phosphorous because there is always some in the system.

153 REP. WHITIY: Even if there were no human pollutants in the Tualatin, would phosphorous from routine leaching still hinder fish propagation?

154 JARRELL: That's our question. - 161REP. VAN LEEUWEN: When we have rainfall in industrial and urban areas, doesn't the rain serve as a cleaning element for pollution in the air?

167 JARRELL: Yes, and when it hits the soil, the soil particles gradually break down and release nutrients.

175 REP. NAITO: How long does it take for phosphates to break down?

179 JARRELL: That can take decades or possibly centuries.

188 REP. JONES: I think the question is: How do we know that what we're doing is going to accomplish what we want?

206 JARRELL: My concern is that there are several sources of phosphorous that we don't know anything about.

215 REP. JONES: The level of purity required by the state also is an issue. How do Oregon requirements compare to requirements in other states? I have heard that some of our drinking water has lower standards than what we're asking for the Tualatin.

243 REP. REPINE: What effect does logging have on phosphate levels?

250 JARRELL: Some logging will mobilize phosphorous in sediment, but

phosphates is not really known. 270 REP. WHITTY: Does phosphorous settle to the bottom or is it everywhere? 275 JARRELL: Some of it settles, but we have no numbers. 278 REP. WHITTY: Will you find out about that. It's important to the fish. 287 REP. NORRIS: In the course of your studies, did you have contact with the Tualatin Valley Irrigation District? 293 JARRELL: Yes. They are a very valuable party. 311 REP. NORRIS: Two suits have been filed but I don't see where this half a billion dollars comes from. Is that a figure imposed on us? 340 TAYLOR: The \$500 million is the estimated cost to USA to meet DEQ numbers. 374 REP. NORRIS: So we're not just talking about capital improvements. We're talking about a whole plan? 382 TAYLOR: Yes. 397 REP. NORRIS: Is there anything the Legislature can do in the way of a bill for this, or are we just viewing in alarm? TAPE 43, SIDE A 004 TAYLOR: There is a joint government structure in place to manage the Tualatin. We are cautious about suggesting if a single entity should be established to manage the river. Other interests may have a different perspective. 12 REP. JONES: Are you comfortable that what we've been asked to do can be accomplished in the time that we've been asked to do it? 17 TAYLOR: We need more information to tell for sure, but we think we can comply in a general sense. 25 REP. JONES: Let me clarify, do you think you will be able to meet the standards that you have set? 25 TAYLOR: The quality level that we expect is for fish to be able to propagate, for people to be able swim and for the Tualatin to meet the phosphorous standard. 31 REP. JONES: Do you have enough scientific information to meet your objectives? 34 TAYLOR: We need a lot more information, and anticipate refining our models. House Committee on Environment and Energy February 15, 1991- Page 9

34 TAYLOR: We need a lot more information, and anticipate refining our models. 45 REP. JONES: Are you suggesting that you need to ask the scientists studying this for that information so that you can determine if what you need to do can be done? 47 TAYLOR: We are confident the clean up can be done. Our question is how it should be done. 50 REP. JONES: You are confident? Has this ever been done? 52 TAYLOR: Rivers have been cleaned up using the methods that we are proposing. I don't know if this has been done using the same parameters we are. 59 REP. JONES: Are the standards you have set for the Tualatin the highest that have been asked for any other location in the nation? 62 TAYLOR: To my knowledge, that is correct. 65 REP. WHITTY: Closes informational meeting. Calls for introduction of committee bills. Hearing no requests, adjourns at 3:33.

Submitted by: Reviewed by: Andy Sloop Kathryn VanNatta Committee
Assistant Committee Administrator

EXHIBIT LOG:

A - Testimony on Tualatin River Clean Up - Lydia Taylor, Department of Environmental Quality - 5 pages
B - United Sewerage Agency Urban Cost Summary - John Jackson, Unified Sewerage Agency - 1 pages
C - Tualatin River Basin runoff modeling data and illustrations - Antonio Baptista, Oregon Graduate Institute - 4 pages
D- Tualatin River Integrated Project overview - Wesley Jarrell and Antonio Baptista, Oregon Graduate Institute - 3 pages