

# Uplands Sewer Separation Project

## Questions and Answers

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### Project Overview

#### 1. **What is the Uplands Sewer Separation Project (USSP)?**

The purpose of this project is to fulfill a legislated requirement to separate our sewer system, and reduce our impact on the environment. To do this, the municipality is separating what is currently a single sewer system for sanitary sewage and storm water in the Uplands area.

The District will install a new sewer system for sanitary sewage. The existing system will be used for storm water. Individual property owners in Uplands will also be required to separate the sewer lines on their property (if they aren't already), install a pump, and connect their sanitary sewer line to the new system.

#### 2. **Why are you doing this?**

This project will fulfill a legislated requirement to separate our sewer system, and reduce our impact on the environment.

#### 3. **Who will be impacted by it?**

Property owners in the Uplands area will be those primarily impacted by this project. This is the only area in Oak Bay, and in the CRD, served by a single sewer system.

#### 4. **What's the cost?**

The total cost of the project is \$7.65 million of which \$5.1 million will be funded from the Building Canada Fund (a federal, provincial and municipal cost-sharing program). Oak Bay will fund the remaining \$2.55 million from within existing resources.

#### 5. **Who's paying for it?**

The federal and provincial governments, and the District of Oak Bay are funding the project. Taxes will not increase from this project as long as the senior government funding remains in place and the total project cost stays within the \$7.65 million budget. Knowing that the Uplands combined sewer system was going to have to be separated the Municipality has been setting aside money for it for a number of years. Individual property owners will be responsible for the cost of separating the sewer lines on their property.

#### 6. **When will it be done?**

To qualify for the federal/provincial funding, the municipal part of the project must be completed by March 2011. Construction work on municipal property will start mid-April and run through to March of 2011.

Under the current regulatory scheme, from the date the new system is certified as operational, homeowners would have one year to complete the work on their properties and make the separate connection to the new public sewer. This particular deadline is set by the Municipality rather than the Province, so it is within the authority of Council to extend it if considered necessary.

**7. How does this fit with regional sewage treatment?**

Doing this work supports regional sewage treatment. Separating our sewer system is in compliance with the CRD Liquid Waste Management Plan. Doing this work may help to reduce Oak Bay's costs under the new sewage treatment plan.

**8. Are taxes going to go up as a result of this project?**

No, not as long as the senior government funding remains in place and the total project cost stays within the \$7.65 million budget. Knowing that the Uplands combined sewer system was going to have to be separated, the Municipality has been setting aside money for this purpose over a number of years.

**9. Where can I get my questions answered**

Please direct your questions to our Director of Engineering Services, Dave Marshall. He will respond to them or see that you get the answers you need. Dave can be reached by email at [dmarshall@oakbaybc.org](mailto:dmarshall@oakbaybc.org) or by phone at: 250-598-3311. Information on the project is also available on our web site at: [www.oakbaybc.org](http://www.oakbaybc.org)

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**The Problem**

**10. What's the problem that's being fixed?**

The District has a single sewer system in the Uplands area that is used for both sanitary sewage and storm water. Legislation requires that these be separated. Doing so, will eliminate sewer overflows and their environmental impact.

**11. How many sewer system overflows do we have a year?**

We have twelve/year on average.

**12. What is the legislated requirement being met?**

By separating the sewer system in Uplands we will be complying with the CRD Liquid Waste Management Plan and the Province's Municipal Sewage Regulations.

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**The Solution**

**13. How are you fixing the problem?**

Our objective is to fulfill the legislated requirement in a way that minimizes costs, limits the impact on affected properties, reduces the municipality's carbon footprint and eliminates sewer overflows. To achieve this, the District has chosen a low-pressure small pipe system that will be used for sanitary sewage. This is the most efficient, cost effective and least disruptive approach to solving the problem. Storm water will continue to drain through the existing pipes.

**14. Why are you using a low-pressure system?**

In choosing a low-pressure system, the municipality studied many options including a gravity system, storage tanks, a vacuum system and more. The pressurized system was selected because of its cost effectiveness, eligibility for funding, minimal disruption to property and its known effectiveness as a sewer system.

**15. How does it work?**

A low-pressure system consists of a grinder pump at each property that pumps sewage through small-diameter pipes to the CRD sewer main. The benefits of the low-pressure system are lower cost, less disruption to the landscape, and greater reliability and protection for the environment. For more information on low-pressure sewer systems, visit [www.eone.com](http://www.eone.com).

**16. Why didn't you go with a gravity system for a sanitary sewer?**

A pressurized system is lower cost, is less disruptive to the landscape, and provides greater reliability and protection for the environment. The cost of the low-pressure system is 1/7<sup>th</sup> that of a gravity system. A gravity system would also still result in a significant amount of inflow and infiltration.

**17. Why didn't you use a storm water retention system?**

The Ministry of Environment rejected this option because they require a separated storm and sewer system. Storm water retention won't achieve that.

**18. Why didn't you consult on the type of system?**

Designing sewer systems is a specialized area of expertise. The municipality has studied many options over the past 30 years. Using the criteria of cost, impact to property owners, environmental impact and eliminating overflows, Council made the decision to go with the low-pressure system.

**19. What process did you go through to determine to use a pressured system?**

Previous reports include: a planning study done in 2004 that looked at options, a study on large storage vaults (storm water retention) was done three years ago, and most recently, a comparative study of gravity systems, low-pressure and centralized vacuum.

**20. Has anyone else used this system?**

Use of a low-pressure system is not new or unique to the Capital Region or Oak Bay. We have a low-pressure system in use in the south area of Oak Bay. Sooke recently completed a similar project and Langford and North Saanich both use it as well. Additionally, property owners routinely request to install both sanitary sewer and storm drain systems to accommodate the terrain of their property (i.e. if they are too low to connect to the gravity system.)

- 21. What's the cost of the pressure system compared to others you looked at?**  
Of four options looked at recently, the low-pressure system was the least expensive. It was almost one-half the cost of a gravity system, which was the most expensive option. When we include the eligible funding from the federal and provincial governments, the cost of the low-pressure system is 1/6<sup>th</sup> that of a gravity system.

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### **Impact to Property Owners**

- 22. What's the cost to individual property owners to connect?**  
This cost will vary depending on a number of factors such as the size of the property, the sewer system currently in use, etc. We recommend that property owners contact a contractor to determine their individual costs.
- 23. Will there be odour from a pressure system?**  
Work is being done to manage and control any potential odour from the system. Experience with low-pressure systems has shown that on-site pump systems have little, if any, odour.
- 24. Will the pump be noisy?**  
No, there is little, if any, noise from the pump.
- 25. What's the pump and storage tank worth?**  
The cost of a pump for each home is approximately \$4,000. The District will pay this cost.
- 26. Do the pumps require maintenance?**  
On average, the pumps require maintenance every ten years and no regular maintenance is required.
- 27. Is the system reliant on power? What happens in the event of power failure?**  
Yes, the pump does rely on power. The storage tanks are built to hold roughly 8-hours of storage for an average family of four.
- 28. When the power is out, can I use my bathroom?**  
Yes, for a limited period of time. The storage tanks are built to hold roughly 8-hours of storage for an average family of four.
- 29. What happens if the power is out for three or four days?**  
BC Hydro is making significant improvements to the power system to greatly reduce long-term outages.
- 30. Will my hydro costs go up with having to run the pump?**  
The pumps do consume power, slightly more than a coffee maker. To an average homeowner, the annual cost of running the pump is approximately \$20/year.
- 31. Will I have to change the plumbing in my house?**  
No, just the exterior sewer connections.

**32. Do I have to upgrade my electrical system to run the pump?**

You will need 220 volts to run the pump. Electrical upgrades will depend on your current electrical system.

**33. I just put in a new Uplands Combined System. Do I have to change?**

Yes, but you can run your lateral through your sewer main.

**34. My storm and sewer go through one pipe out to an easement. What does this mean for me?**

You will need to separate the sewer line from the storm water. The small diameter (1¼") sewer main will need to go to the property line to connect to the line the municipality will install.

**35. Will all the sanitary in my house have to go through the pump?**

Yes.

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**Municipal Construction Work**

**36. What will the municipality actually be doing?**

We will be installing new main pipes under roadways, bringing pipes to individual properties for connection and supplying property owners with pumps and storage tanks for their home or business property.

**37. How long will construction take? When will it start?**

Constructing the new sewer system will take about a year. We plan to start by mid-April and be done by March 2011 – a requirement of the federal/provincial funding. Property owners will then have until March 2012 to connect to the municipal lines.

**38. Will we get a new road?**

No. Whole roads will not be disrupted for this construction.

**39. What section of the Uplands will the work start in?**

A construction schedule will be done and property owners will be notified when work is going to be done in their area. Construction will be done simultaneously in a number of locations throughout Uplands.

**40. Is Oak Bay going to do the work required on private properties?**

No, property owners will be required to do the work needed to connect to the new sewer system.

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**Property Owner Construction**

**41. Who can do the work on my property?**

Anyone that obtains and meets the requirement for a plumbing permit can do the work.

**42. Do you have any contractors that you'd recommend for this work?**

We don't have a preferred supplier list as such, however, if people living in the Uplands area were to get together to contract for the work needed, volume discounts from reputable suppliers would probably be available.

**43. Does the work on my property require any permits or inspections?**

Yes, a plumbing permit is required and the attendant inspections.

**44. Can I use a different tank size?**

Yes, different tank sizes will be available at additional cost to the property owner.

**45. Can I put in a septic system on my own and not use the Municipal system?**

No, this would be contrary to the legislated requirements.

**46. If I supply my own pump, will I get a rebate?**

Unfortunately, rebates are not fundable under the federal/provincial grant program that is covering the bulk of the project cost.

**47. I have an easement through my back yard and my neighbour's. Will my new line go there?**

No, it will not. That's one of the benefits of using a low-pressure system.

**48. I don't want the pipe located where you propose. Can it be changed?**

Yes.

**49. When will the line be completed in front of my house?**

A construction schedule will be developed and shared with property owners.

**50. Can my pump line run around my garden or does it have to go in a straight line?**

The pipe is flexible. Property owners can work with a contractor to place the pipe in a location suitable to you.

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