Model Setback Ordinance
For Transmission Pipelines

In 2000, following the 1999 Olympic Pipeline disaster in Bellingham, the state legislature directed MRSC (through the Municipal Research Council) to draft model franchise ordinances for natural gas and hazardous liquid transmission pipelines, and also a model ordinance for setbacks from those major energy pipelines. Prior to the Bellingham disaster almost all local governments in Washington were, in essence, ignoring the existence of the transmission pipelines within their jurisdictions. There were even some newly incorporated cities in the I-5 corridor that did not have franchise agreements with the operators of pipelines passing through their jurisdiction. This "model ordinance" is a sample for you to use as reference. The model ordinance contains clauses that you may wish to consider including in your own jurisdiction's franchises or code. Each local government is free to use or modify any language included in this document.

Model Setback Ordinance

See also Commentary on the Model Setback Regulations for Natural Gas Transmission Pipelines following the text of model ordinance.

ORDINANCE NO. _____

AN ORDINANCE ESTABLISHING SETBACK REQUIREMENTS FOR NEW HAZARDOUS LIQUID AND GAS TRANSMISSION PIPELINES WITHIN AND THROUGH THE [CITY/COUNTY] OF _____.

NOW, THEREFORE, THE CITY OF _____ DOES ORDAIN:

Section 1. Definition.

Pipeline Corridor shall mean the pipeline pathway through the jurisdiction [designate city or county] in which the pipelines and facilities of a pipeline operator are located, including public rights-of-way and easements over and through public or private property.

Section 2. Setback Requirement for Gas Pipelines.

Setback requirements from gas transmission pipelines for general residential, commercial, and industrial buildings shall be a minimum of 50 feet. The setback distance shall be measured from the nearest edge of the pipeline corridor.

Section 3. Setback Requirement for Hazardous Liquid Pipelines.

The setback requirement from a hazardous liquid pipeline corridor for all general residential, commercial, and industrial buildings shall be a minimum of 50 feet. The setback distance shall be measured from the nearest edge of the pipeline corridor.

Section 5. Effective Date.

[Insert appropriate wording.]

PASSED/ADOPTED this ____ day of _____, 20___.

SIGNATURE LINE:

ATTEST:

APPROVED AS TO FORM:

PUBLISHED:

Commentary on the Model Setback Regulations for Natural Gas Transmission Pipelines

The model setback ordinance was first published by Municipal Research in 2001. Some commentary may help others understand the complex issues involved in establishing setbacks and zoning regulations for high pressure, large diameter, natural gas transmission pipelines.

Encroachment

The primary reason for establishing setbacks from transmission pipelines is to avoid encroachment on the pipeline right-of-way, thereby reducing the likelihood of third party damage to the pipeline. Typically such damage in urban settings is caused by construction activity or underground utility work. Third party damage can certainly be lessened by consistent

use of one-call utility locator systems, but experience shows that keeping construction or utility work away from pipeline easements or corridors is preferable. An adequate setback for avoiding third party damage can be far less than the setback distance needed to protect individuals from the energy of a catastrophic rupture.

Personal Safety

There are no generally accepted zoning standards for land uses in close proximity to natural gas transmission pipelines. In the absence of accepted standards, a priority of local governments should be the protection of the lives and property of those living, working or recreating in the vicinity of natural gas transmission pipelines. There was a recent industry sponsored study that provides an empirical method for determining the risk to individuals if there is a rupture and ignition resulting in an explosion: A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines," authored by Mark J. Stephens, prepared for the Gas Research Institute, and dated October 2000. Figure 2.4 of that study contains a graph showing the area at risk depending upon the diameter of the pipe and the operating pressure. The study assumes that individuals are on open terrain, not protected by buildings or any intervening land form, and that such "at risk" individuals can quickly leave the area or reach adequate shelter.

A jurisdiction could choose to permit single family residences, but not multi-family housing, within a specified distance from the pipeline easement. A jurisdiction could choose to prohibit facilities such as nursing homes or hospitals within a certain distance from the pipeline easement. Zoning regulations can encourage mini-storage structures or similar uses near pipelines. The goal should be to zone in a way that minimizes the likelihood of large numbers of casualties in the event of a catastrophic rupture.

Financial Impacts

Because of increasing urbanization in the areas surrounding existing pipeline easements, zoning regulations involve a balancing of the financial interests of property owners in proximity to the pipelines and the safety of the increased numbers of people who would be placed within the zone of risk if more intensive development is permitted.

Zoning regulations would be less controversial if existing and future natural gas transmission pipelines could be routed through farmland or other undeveloped lands. When originally constructed, many of the older, major natural gas transmission pipelines were sited in that way. But population growth and development patterns have brought increased population densities to the areas surrounding many of these transmission pipelines, and difficult decisions must now be made.

Pipeline companies are very quiet on the issue of setbacks, probably because of the financial implications. Setbacks lessen the likelihood of third party damage from encroachment activity and lessen the possibility of personal injuries if there is a release from a transmission pipeline. Though pipeline operators might prefer that structures not be built close to their pipelines, publicly they will not say that setbacks are necessary or recommended. The pipeline industry instead puts out a consistent public message that their pipelines are "safe". How "safe" is a matter of opinion, and varies depending upon the pipeline operator. Historically, pipeline operators purchased easements that were adequate for installation and maintenance of their pipelines, with probably little awareness that there would be significant pressure for development around their pipelines decades later. Setbacks can impose a financial burden on landowners whose property adjoins or is near the pipeline easement because they generally are not compensated for reduced development potential.

Local Government Discretion

A city or county, as part of the normal planning process, needs to establish setbacks and zoning regulations for the natural gas transmission pipelines that are within its jurisdiction. Those regulations are a quantification of the risk that the local government decides is acceptable. To what extent should a city or county choose to protect its residents from the relatively low probability of a catastrophic pipeline rupture? Residents of the Puget Sound basin, by choosing to live here, accept the risk of a major earthquake, but it is unclear if the risks of a major pipeline rupture are known or appreciated by those who live in close proximity to a natural gas transmission pipeline. The unfortunate reality is that in our increasingly dense cities development will generally occur to the extent allowed by current land development regulations, and people will buy homes adjoining pipeline easements, assuming that construction permits would not have been issued by the city if the development was not safe. Residents rely upon cities and counties to provide safe environments to live and work, and establishing prudent setbacks is part of that difficult task.