BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

DOCKET NO. 04M-111T

IN THE MATTER OF THE REVIEW OF CERTAIN WHOLESALE RATES OF QWEST CORPORATION

WRITTEN PUBLIC COMMENTS OF
RUBY RANCH INTERNET COOPERATIVE ASSOCIATION

In December 2001 the Commission established a price of $8.73 per month for unbundled distribution loops, and in reliance on this price the Ruby Ranch Internet Cooperative ("the Coop") launched DSL service. In May of 2002, the Commission tripled the price to $24.13 per month, causing grave economic hardship to the Coop. Thereafter upon learning of this action by the Commission, the Coop asked the Commission for relief from this tripled price; the Commission declined, saying that the matter would have to wait until a "Phase II" proceeding.

The Commission has now opened the present docket in which the geographic deaveraging of prices for such subloops is being reconsidered. As detailed below, the Coop asks this Commission to reduce this price to a reasonable level.

Summary. The Commission based its existing "deaveraged" rates on the belief that there would be an arbitrage opportunity for those who rent unbundled distribution loops if the price were uniform statewide. The Commission was, however, mistaken in this belief; those who rent unbundled distribution loops are not eligible to subsidies from the high-cost fund and thus cannot engage in such arbitrage. The price they pay for such subloops ought not to be geographically deaveraged at all.

A second flaw in the Commission's pricing decision was the assumption, never clearly stated, that the price for an unbundled distribution loop ought to be proportional to the price for an entire loop, and that

the proportion ought to be high (about 74%).

Unbundled distribution loops ought to be removed completely from geographic deaveraging, and the pricing ought to be a much smaller fraction of the price of an entire loop than the fraction previously adopted.

The Commission ought to set a much lower and uniform statewide price for unbundled distribution loops and ought to make this price retroactive to May 2002.

Background. On May 16, 2002, the nonprofit Ruby Ranch Internet Cooperative brought high-speed symmetrical Internet access ("SDSL") to a geographic area that was unserved by Qwest or any other provider. It was able to do so only because of the Telecommunications Act of 1996, which requires incumbent local exchange carriers ("ILECs") such as Qwest to rent otherwise unused distribution subloops to entities such as the Coop.

The Coop, located in Summit County, Colorado, is a "one-product company." The only thing the Coop does is providing Internet connectivity to its subscribers. It does not provide voice service or any service other than Internet connectivity. Its chief recurring cost is the monthly rental fee for distribution subloops which permit connecting its DSLAM (located in a horse barn) to its subscribers. The Coop is a facilities-based carrier, providing its own DSLAM and other network equipment to serve its subscribers. The only network elements needed from Qwest to provide SDSL are the distribution subloops.

Three weeks after the Coop launched service, the Colorado Public Utilities Commission ("Commission") in its decision C02-636 adopted Qwest's recommendation that distribution subloops in most areas of Colorado would increase in price to $24.13 per month. Prior to this increase, the Coop was being charged $8.73 monthly for each subloop, a price that was set in the Commission's decision

no. C01-1302, mailed December 21, 2001. At a stroke, the Commission tripled what was then the Coop's chief recurring cost.

The Commission apparently was not, however, satisfied with the rates that it set in 2002:

> The Initial Decision and RRR Decision point out that the deaveraged loop rates are interim only, and subject to Phase II deaveraging proposals.

(Decision C02-636 at 12.) The Commission also said:

> All of these concerns, and others, will have to be examined in Phase II of this proceeding. On an interim basis, however, we will relent and endorse the Qwest rate group proposal. This has the strength of at least being familiar to the carriers. Nonetheless, we anticipate a critical look at deaveraging in the next phase of this proceeding.

(Decision C02-636 at 15.)

In 2002, the Coop predicted that the Commission's price increase would guarantee that nobody else would follow in the Coop's footsteps. The Coop predicted that those who were unserved by DSL then would never be served by DSL, as a result of the Commission's actions. These predictions have been borne out; in the two years since this price increase, no other entity has launched DSL Internet access in locations unserved by Qwest, and this is due chiefly to the unreasonably high price for unbundled distribution loops. In 2002, most of the geographic area of the state of Colorado was unserved by anyone for DSL Internet access, and this remains true to this day, almost entirely due to this price increase by the Commission.

Exhibit A, attached, shows in red the areas of Colorado that were harmed by the Commission decision and which are even now not served by SDSL.

Why the Coop is not able to intervene in this docket. Intervention is, quite simply, out of the question for the Coop. The Coop has no employees, only volunteers with demanding day jobs. The Coop has no office in Denver (or anywhere else), but would have to send its volunteers in an hour-and-

a-half automobile drive to Denver (and another hour and a half back from Denver) to attend any Commission meeting or hearing. The Coop has no room in its nonprofit budget, comprised of monthly payments from only about two dozen subscribers, to pay Denver-based lawyers to attend such meetings and hearings.

Even service of papers is beyond the means of the Coop. The postage and printing costs of just one or two mailings to all participants in this docket would exceed the Coop's annual revenues.

The volume of paper must also be taken into account in considering whether it is reasonably within the means of an entity as small as the Coop to participate in such proceedings. To bird-dog this pricing issue (among the many issues that will be pursued in this docket) would require that the Coop read tens of thousands of pages of documents having no impact at all upon the Coop. The Coop, with no employees and no room in its budget to hire lawyers to read the tens of thousands of pages of documents, was and is simply unable to participate meaningfully in such proceedings.

For all these reasons, the Coop can only take the limited step of communicating its concerns to the Commission in the hopes that the Commission will investigate this issue fully and correct the problem of the too-high rate.

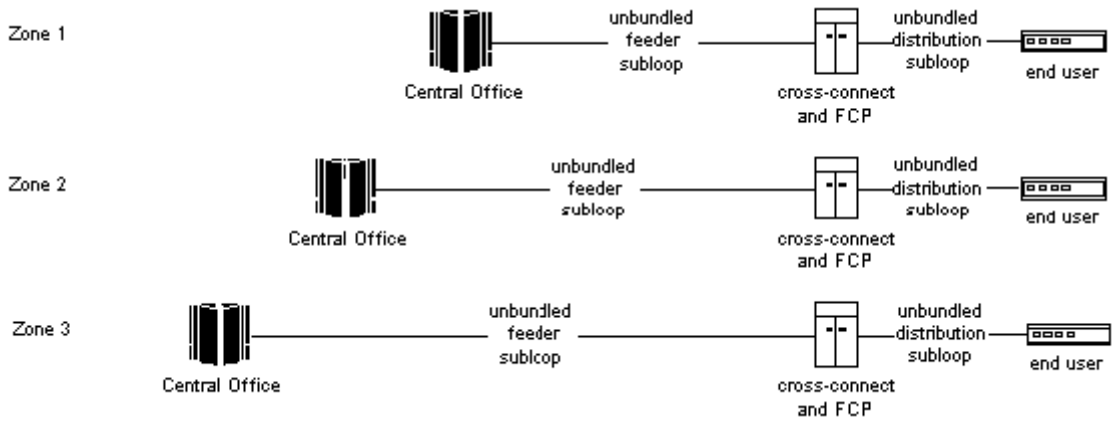
What are distribution subloops and how long are they? To explain subloops it is first necessary to be clear on what a "loop" is. A loop connects a telephone company central office to an end-user location. Loops range in length from a few feet to many miles, depending on the distance between the end user and the central office. Loops in rural areas tend, on average, to be longer than loops in urban areas.

Decades ago, loops were always all copper for their entire length. It is commonplace nowadays, however, for a loop to be mostly fiber and only copper for the last few hundred or thousand feet. The

reason for this is that Qwest uses digital loop carrier (DLC) boxes. The box is placed nearby to some neighborhood of recent growth to minimize how much of the loop is copper. The box is then connected by fiber to the central office.

Most loops pass through what is called a "cross-connect" box or "serving area interface" (SAI). The pair from the SAI back to the central office (or back to the DLC box) is called an "F1" and the pair from the SAI to the end user is called an "F2".

A subloop is part of a loop, and the subloop's extent is defined by the location of a Field Connection Point ("FCP"). The part of the loop between the FCP and the central office is called a "feeder subloop" and the part of the loop between the FCP and the end user is called a "distribution subloop." In most cases the FCP is at a cross-connect box. Due to the installation of the FCP at such a location, the F1 is thus also known as a feeder subloop and the F2 is thus known as a distribution subloop. This is shown in the figure.



(Qwest's terminology for these loops and subloops is spelled out in Qwest's Technical Publication 77405 entitled "Interconnection - Unbundled Sub-Loops and Field Interconnection", available at http://www.qwest.com/techpub/77405/77405.pdf .)

Under uniform Qwest practice, at cross-boxes the buried cable plant is such that the number of F2s is double the number of F1s. There will be twice as many binding posts for F2s in a cross-box as there are binding posts for F1s. If an F1 is in service, this means it is cross-connected to an F2. This guarantees that fully half of the F2s will never be in service. Stated differently, even if every F1 in a cross-box were in service, this would consume only half of the F2s in that cross-box. In the cross-box where the Coop paid to have an FCP installed, the buried plant is such that there are binding posts for 200 F1s and binding posts for 400 F2s.

It is important keep in mind, then, that fully half of the buried plant from an FCP to end user locations is guaranteed never to be used by Qwest. When the Coop rents an unbundled distribution loop, it is renting one pair out of the fully half of all buried F2 pairs that can never be used by Qwest.

The F1 (and not the F2) is the limiting resource for the number of POTS lines that Qwest can deliver to end users served by any particular cross-box.

This fact bears emphasis. When somebody rents an entire loop from Qwest (all the way from the central office to an end user), this ties up a loop that Qwest might have used for POTS service and could conceivably later deny Qwest revenue it could have earned from such POTS service. The loop includes an F1 and the F1s are the limiting resource.

In contrast, when the Coop rents an F2 (an unbundled distribution loop), this does not tie up any F1s at all. Indeed, even if all of the F1s in a cross-box were in use (as actually happened in the Coop's service area a few years ago) this still would leave two hundred spare F2s making no money for Qwest unless someone such as the Coop were to rent them.

Entities who rent F2s (and not F1s) yield "found money" for Qwest, money from subloops that would otherwise be impossible to use for any revenue purpose by Qwest itself. Stated differently, entities who

rent unbundled distribution loops are renting pairs that Qwest would never be able to use for any revenue purpose.

Having described and defined field connection points and unbundled distribution loops, it is instructive to describe why anybody would pay Qwest to install an FCP and why anybody would rent an unbundled distribution loop.

The usual purpose of an FCP is to connect a DSLAM (DSL access multiplexer) so as to provide DSL service to subscribers who are at end user locations.

In a simple and increasingly rare case, an unbundled loop extends as continuous copper from a telephone company central office to a customer location. Only at most about 36% of loops in Colorado are continuous copper loops. Few if any FCPs, however, are installed in continuous-copper loops, for the simple reason that where the loop is continuous copper, it is always better to put the DSLAM in the central office so that it can serve loops extending in all directions from the central office. Instead, nearly all FCP's are installed somewhere between a DLC and an end user, as described below.

It is important to appreciate that there are very few unbundled distribution loops in Colorado because (a) an unbundled distribution loop only comes into existence if an interconnecting carrier pays Qwest to install an FCP and (b) very few FCPs have been installed in Colorado. (It is the belief of the Coop that fewer than a hundred FCPs exist in Colorado.)

As mentioned above the number of continuous copper loops in Colorado is small and getting smaller all the time. More often (about 64% of the time in Colorado) the customer is isolated from the central office by the juxtaposition of a "remote terminal" or DLC box as mentioned above. With a DLC, most of the distance from the central office to the customer is covered by a fiber optic cable to the DLC, and

only the last thousand or so feet (from the DLC to the subscriber) is copper. When a loop containing a DLC is very long, most of the length is between the DLC and the central office (and is fiber). Thus the copper part of the loop for a very long loop involving a DLC may well not be much longer than, and may well sometimes be shorter than, the copper part for a much shorter loop involving a DLC.

FCPs cannot connect to fiber, but can only connect to copper. With a DLC, the CLEC or DLEC has very little discretion where to put it. The FCP can only be placed in the short length of copper between the DLC and the subscriber. Stated differently, it is not possible to install an FCP in the middle of the optical fiber lying between the DLC and the central office.

A further constraint on the location of an FCP is that Qwest will generally refuse to install one anywhere other than at a cross-connect box (Serving Area Interface). This means the FCP lies at the place where F1 cables and F2 cables come together. Stated differently, the length of an unbundled distribution loop almost never includes the portion of the copper that is termed F1 and generally includes only the portion of the copper that is termed F2.

The distribution subloop is thus necessarily only a small fraction of the distance from the subscriber to the central office. This result obtains first because the FCP cannot be in the fiber part of a loop, and second because the FCP can only be someplace in the midst of the copper part of the loop. The copper part of a loop is only a small part of the distance from the central office to the end user, and the F2 part of the copper part of a loop is only a small part of the distance from the DLC to the end user.

The loops that serve the Coop's service area are served by a DLC. Thus a substantial part (about 3.5 miles) of the loop is fiber (between the central office and the DLC). The cross-box serving the Coop's service area has F1s (which connect the DLC to the cross-box) and has F2s (which connect the cross-box to end users). The F1s are half a mile in length. The Coop has exactly one FCP, located at the cross-box. Thus the Coop's FCP is located about four miles from the serving central office.

The distribution subloops for the Coop's FCP, which by definition are F2s (the copper pairs between the FCP and the subscriber locations), range in length from 500 to 7000 feet, averaging about 3000 feet. As such, they represent between 2% and 33% of the loop length, averaging about 15% of the loop length.

The chief reason why any CLEC or DLEC would install an FCP is to provide DSL services to someone who is isolated from the central office by a DLC. Thus, the majority (perhaps all) of the FCPs in Colorado are located on the subscriber side of a DLC (rather than in the middle of a continuous copper loop). From this it follows that the majority of (and perhaps all) distribution subloops in Colorado are short, only a few hundred or at most a few thousand feet. The majority of distribution subloops in Colorado represent only a small fraction of the overall loop length.

It is also important to appreciate that there is no reason at all why the distance to the central office should play any significant part in the pricing of distribution subloops. A 1000-foot distribution subloop that is one mile from a central office is physically indistinguishable from a 1000-foot distribution subloop that is ten miles from a central office. In either case the length of the long part of the loop (the part that would be termed a "feeder subloop") is irrelevant.

The Commission's actions regarding pricing of Distribution Subloops. When the Coop signed its interconnection agreement with Qwest in early 2002, the price of distribution subloops was $8.73 per month, a price which had been set by the Commission in its decision no. C02-209 in docket no. 01B-493T, mailed March 1, 2002. In that decision, the Commission cited Decision No. C01-1302 as controlling as to the price for distribution subloops.

A few weeks later, in decision no. C02-409, mailed April 17, 2002, the Commission ordered Qwest to take certain steps to "deaverage" prices for analog loops.

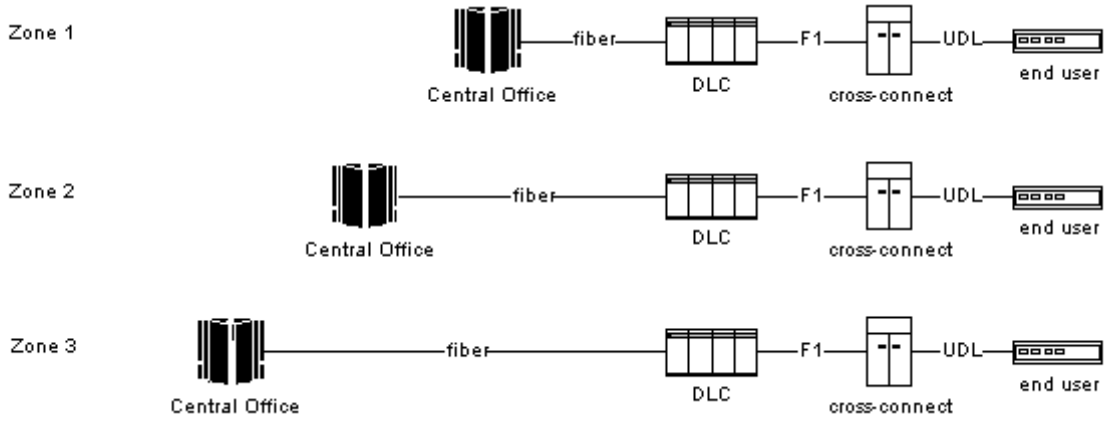
Qwest's request to raise prices. Citing the April 17, 2002 decision, on May 8, 2002 Qwest filed an Application for RRR. In this application, Qwest raised questions about pricing of DS0 capable loops, High Capacity loops, and DS1 capable feeder loops. Exhibit A to this application was entitled "Supporting Information for Calculations of Qwest's Alternative Rate Group Deaveraging Proposal for DS0 Capable Loops." Exhibit B to this application was entitled "Weighted Average of Commission-Ordered Deaveraging for High Capacity Loops."

Only in passing were unbundled distribution loops even mentioned in Qwest's application, for example in the exhibit ("Summary of Rate Groups For Qwest's Alternative Deaveraging Proposal") that proposed tripling the price charged to the Coop for distribution subloops. Even an alert reader might be forgiven for concluding that this application only affected High Capacity loops, DS0 capable loops, and DS1 capable feeder loops, and might be forgiven for missing that a tripled price for unbundled distribution loops was tucked away in the statement of relief requested.

The Qwest application arrived at a proposed monthly rental price for 2-wire analog loops, and then *with no explanation whatsoever as to its reason for doing so*, states without support that the correct price for distribution subloops should be some fixed fraction of the price for the entire loop. For example, in rate group or zone 3, the price proposed for the 2-wire analog loop is $32.74 monthly and the price proposed for the unbundled distribution loop is 74% of that amount, or $24.13 monthly. Assuming for sake of discussion that $32.74 is a reasonable price (which the Coop does not concede), then the 74% fraction apparently assumes that every Field Connection Point is about one-fourth of the way from the central office to the end-user location. In its filing, Qwest thus reduced the whole-loop price by one-fourth to arrive at a price for the remaining three-quarters of the loop which would (supposedly) lie between the FCP and the subscriber location.

It is, however, a mistake for Qwest (or for this Commission) to assume that every Field Connection Point (or indeed even the average Field Connection Point) is one-fourth of the way from the central

office to the end-user location. Each FCP is where it is because (a) it must be further from the central office than the DLC, and (b) it must be at a cross-box somewhere between the DLC and the end users. Thus most FCPs are far from the central office, not close to it, as shown in this figure.



In the case of the sole FCP owned by the Coop, depending on the particular circuit involved, the Coop's FCP is actually between 67% and 98% of the way to the subscriber end of the loop. Again assuming for sake of discussion that $32.74 is a reasonable deaveraged price for an entire loop (which the Coop does not concede), then the price for the distribution subloops ought to be in the range of $10.80 to 65 cents per month.

As mentioned above, however, there is simply no reason why deaveraged prices for whole analog loops should be the driving factor for pricing of distribution subloops. Yes, many analog loops in (for example) DeBeque are tens of miles long while many analog loops in central Denver are only a thousand feet long. But the distribution subloops (which by definition cannot exceed the length of the copper between the DLC and the end user) in DeBeque (now priced at $24.13 per month) are probably not much longer than distribution subloops in central Denver (now priced at $3.59 per month). Stated differently, the ratio of monthly prices (rate-group-3 distribution subloops presently cost almost seven times as much as rate-group-1 distribution subloops) would suggest a mistaken impression

that the distribution subloops in rate-group-3 areas are almost seven times as long, on average, as the ones in central Denver. And indeed that impression is mistaken.

If the rental price for a distribution subloop were to be set as a specified percentage of the rental prices for a whole loop, then the fraction should be much smaller than one-half.

More equitably, however, the rental price for a distribution subloop should probably have no connection at all to the rental price for the whole loop of which it is a part. Likewise it should probably have no connection at all to the "distance to the central office." Probably all the distribution subloops in Colorado should cost about the same, since they are all about the same length. Stated differently, if one whole loop containing an FCP is substantially longer than another whole loop containing an FCP, probably the distribution subloops are nonetheless roughly equal in length, and it is the feeder subloops (not the distribution subloops) that would vary in length as a function of the lengths of the whole loops.

From a rate-setting point of view, it is not at all clear that distribution subloop prices should move in lockstep with loop prices. Even if there is some good reason to charge different prices for loops based on their lengths, there is no good reason to extend this different-price approach to distribution subloops.

How the Commission ruled on Qwest's application for RRR. The Commission granted the part of Qwest's application which called for tripling the monthly price for distribution subloops, saying:

> In the Decisions, we found the interim deaveraging method consistent with how Colorado high cost support is calculated and distributed to Qwest. High cost support is portable to another eligible provider. Thus, an eligible provider who purchases a UNE from Qwest will be qualified to receive the high cost support for that customer. We determined that our interim deaveraging plan creates proper price signals because the variation in costs between wire centers is significant. Our interim method acknowledges the disparate prices associated with the various wire centers across the state. Because it more closely matches wholesale loop pricing with high cost support, it also eliminates opportunities for regulatory arbitrage that might arise under a more standard rate group deaveraging plan.

(Decision C02-636 at 13.) The Coop, composed of volunteers with no experience with state telecommunications regulatory practices, does not pretend to know exactly what this means. But the impression which the Coop gathers from the quoted language is something like this:

> - POTS telephone companies in rural areas apparently get lots of money from "high cost support."
>
> - If the POTS companies in these rural areas were charged mere state-average prices for analog loops used for POTS telephone service, they would make money through arbitrage.
>
> - It is therefore necessary to set extremely high wholesale prices in these rural areas for analog loops used for POTS telephone service.

Alternatively, perhaps the Commission means that Qwest somehow makes money due to "high cost support" payments to it. In the Decision, the Commission said:

> The [high cost support] payments to Qwest vary widely among 106 of Qwest's 166 individual wire centers receiving support. Currently, support to Qwest ranges from $0.24 per month per loop to $182.70 per month per loop.

(Decision C02-636 at 15.) The Coop does not know whether Qwest receives any "high cost support" payments relating to distribution subloops rented by the Coop. What the Coop does know is that the Coop is now being asked to pay a monthly price for distribution subloops that gives no indication that the price is reduced due to any such "high cost support".

The Commission seems to suggest that having extremely high monthly prices for analog loops is not a problem for the party paying such a price because anyone who must rent such a loop can get money from the "High Cost Fund."

> This interim deaveraging method is consistent with how the Colorado high cost support is calculated and distributed to Qwest. Qwest is currently receiving in excess of $59 million [] a year by wire center costs, not rate group. High cost support is portable to another eligible provider. Thus, the eligible provider who purchases a UNE is qualified to receive the high cost fund support for that customer. Our interim deaveraging plan creates the proper price signals

> because the variation in costs between wire centers is significant. For example, the Denver Main UNE Loop rate is approximately $6.00; the DeBeque UNE Loop Rate is approximately $171.

(Decision no. C02-409, mailed April 17, 2002 at 59-60.) This suggestion is repeated in Qwest's May 8, 2002 filing:

> The fund operates to bring rural rates to a comparable level with urban rates. From a UNE-based provider's perspective, that provider will be compensated for the difference between its cost, *i.e.* the UNE price, and the benchmark. For example, assume the benchmark is $20, the facility-based provider's costs are calculated at $30, and the price for the UNE is $25. The UNE provider would receive $5 in support and the underlying facilities-based provider would receive $5 in support. The fund compensates each provider for the difference between its "price" and its "cost" and, thereby, operates as an incentive for providers to serve supported areas. 4 CCR 723-41-8.4 and 9.4 (1999). Qwest submits that issues relating to high cost fund compatibility and the significant implementation obstacles should be explored and developed in Phase II.

(Qwest May 8, 2002 filing in docket no. 99A-577T at 5-6.)

What this seems to ignore, however, is that high-cost support is apparently available only to local exchange (POTS) telephone carriers. (See 4 Code of Colorado Regulations (CCR) 723-41.) A pure data carrier such as the Coop is thus stuck paying an extremely high monthly price for its unbundled subloops, yet is not eligible to receive the high cost support which supposedly alleviates the objectionably high monthly rates. The Coop receives no "compensation" such as described in Qwest's filing.

To restate, there seem to be two distinct flaws in the deaveraging approach proposed by Qwest and ordered by the Commission. First, it assumes that all purchasers of unbundled loop elements are beneficiaries of the "high-cost fund," which is false. Pure data (non-POTS) carriers such as the Coop simply don't get any of this "high-cost fund" money. Second, it assumes that POTS-subsidy arbitrage can be carried out on any and all unbundled loop elements, and thus that it is appropriate to triple the prices for all such elements. This, too, is false. It is not possible to carry out POTS-subsidy arbitrage

on a distribution subloop; the would-be arbitrageur needs an *entire* loop to provide POTS service which then supposedly permits efforts at arbitrage.

The Commission apparently had particular concerns that prompted it to set the rates in its June 6, 2002 decision, namely concerns about risks of arbitrage by POTS carriers (or by Qwest, or both) due to the interplay between the "high cost fund" and the wholesale prices for loops suitable for POTS use. Unfortunately the rough justice arrived at by Qwest and by the Commission was overbroad, and it affected prices that (a) are paid by carriers such as the Coop that are ineligible to receive "high cost fund" monies and that (b) apply to unbundled elements (distribution subloops) that cannot be used for POTS service anyway.

Summary. The Commission based its existing "deaveraged" rates on the assumption that there would be an arbitrage opportunity for those who rent unbundled distribution loops if the price were uniform statewide. This assumption by the Commission is false; those who rent unbundled distribution loops are not eligible to subsidies from the high-cost fund and thus cannot engage in such arbitrage. The price they pay for such subloops ought not to be geographically deaveraged at all. The price they paid for the past two years ought not to have been geographically deaveraged at all.

A second problem in the Commission's pricing decision was the assumption that the price for an unbundled distribution loop ought to be proportional to the price for an entire loop, and that the proportion ought to be high (some 74%). This assumption, never openly stated by the Commission and never supported in any way, was also in error.

Unbundled distribution loops ought to be removed completely from geographic deaveraging, and the pricing ought to be a much smaller fraction of the price of an entire loop than the fraction previously adopted.

The Commission ought to set a much lower and uniform statewide price for unbundled distribution loops and ought to make this price retroactive to May 2002. For two years now, the Coop has been forced to pay a price for unbundled distribution loops that is three times what it should have been, and a true-up to May 2002 is called for.

Respectfully submitted,

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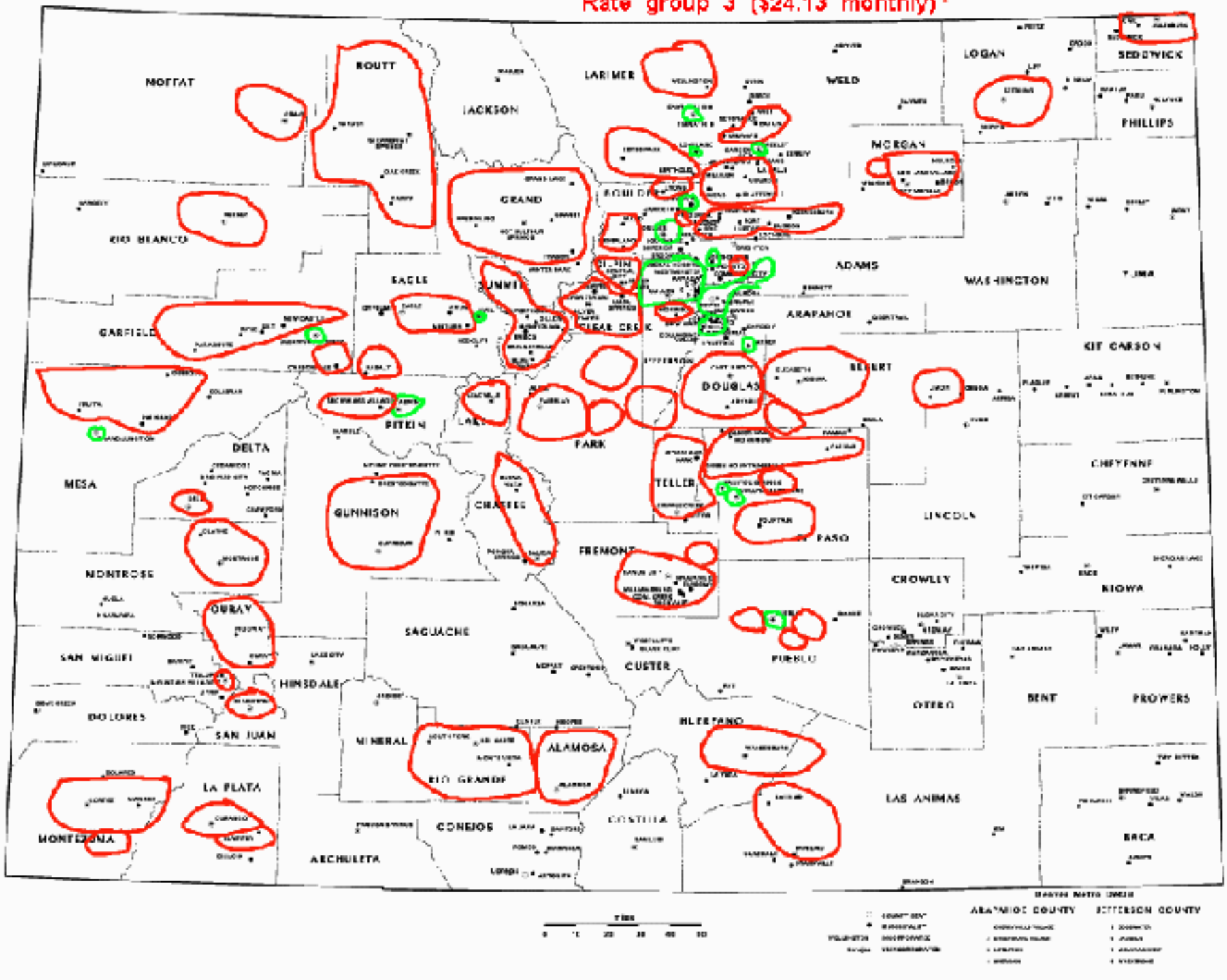
Consequences of PUC Decision C02-536
Rate groups 1-2 ($8.01 or $3.59 monthly)
Rate group 3 ($24.13 monthly)
MOFFAT
ROUTT
JACKSON
LARIMER
WELD
LOGAN
SEDGWICK
PHILLIPS
MORGAN
GRAND
RIO BLANCO
EAGLE
SUMMIT
CLEAR CREEK
GILPIN
ADAMS
WASHINGTON
ARAPAHOE
GARFIELD
KIT CARSON
DOUGLAS
ELBERT
PITKIN
LAKE
PARK
DELTA
MESA
TELLER
CHEYENNE
GUNNISON
CHAFFEE
LINCOLN
EL PASO
FREMONT
MONTROSE
CROWLEY
KIOWA
OURAY
SAGUACHE
SAN MIGUEL
CUSTER
PUEBLO
HINSDALE
OTERO
BENT
PROWERS
DOLORES
SAN JUAN
MINERAL
ALAMOSA
BLTEFANO
RIO GRANDE
LA PLATA
LAS ANIMAS
CONEJOS
COSTILLA
MONTEZUMA
ARCHULETA
BACA
ARAPAHOE COUNTY
JEFFERSON COUNTY