

VoIP & Numbering

NARUC Staff Subcommittee on Telecommunications

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By

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- There are only two internationally accepted and standardized routing schemes.
 - Telephone Numbers (PSTN)
 - Domain Names (IP Network)
- Consumer reluctance
 - To give up phone numbers
 - To move to a new technology and abandon what they understand
- New VoIP-based services using phone numbers

Cable-based VoIP

The cable market is one of the most important segments for VoIP-based softswitch sales, reports a recent IDC study titled "Softswitch Suppliers: The Battle for VoIP (and IMS) in the Cable Market." The U.S. market for cable-based VoIP is expected to increase from 2.2 million subscribers in 2005 to 19.8 million in 2009, according to the IDC survey.

TMCnet.com, Sims, David, February 1, 2006

Pac-West to Expand Its Network and Services Nationwide

“The big question, of course, is where Pac-West thinks it can peddle its services. Carabelli [Pac-West Pres & CEO] has a few unusual ideas about that. The first is a pitch to **rural carriers** that, until now, have been limited in growth opportunities to their own geographic footprints. With the Pac-West offering, those limits disappear - in theory, a carrier could peddle its services as a VoIP carrier just about anywhere. “We believe there's an opportunity through VoIP for them to branch out and expand their brand,” Carabelli says. Carabelli also argues that companies not yet in the phone business may be attracted to the offering as a quick way to offer VoIP phone services – possibly at major cut-rate prices - mainly as way to attract users to other aspects of their businesses. “The **Yahoo!s and Googles** of the world have an opportunity to do something disruptive,” he says, because “they may not want to make a profit“ on the VoIP service.”

VoIP, Inc., Media Files, November 1, 2005

Location Based Services

Crime Prevention

- New Mexico's Bernalillo County has implemented a GPS program that uses cell phones and ankle bracelets to track repeat violent offenders who might violate restraining orders.
- Other counties across the country have adopted similar programs that rely on GPS.

Verizon Chaperone

- Verizon Wireless reported plans to market to parents a GPS tracking system for them to track their teenagers via cell phones.

Free/Cheap Phone Service

"So, if you have a Chicago-based number, but you're living somewhere in the suburbs of Paris, your Chicago area friends - or anyone! - can just dial your number, and your phone on the other side of the world starts ringing... and your friends are only paying whatever their phone company charges them for making a phone call to Chicago."

"We're taking phone numbers in Iowa and giving them to the rest of the world."

"Get a free voicemail number to use anyway you want. It's great to use in classified ads, on-line forms, or to give out when you're socializing."

"I've been an eBay seller for the last 2 year, in that time I have seen a lot of technologies come and go. Last week, I signed up for a [company name deleted] account and was surprised by how easy it was to use. US buyers can now reach me by dialing my [US number] and talk to me directly. My sales went up because I stopped using my Hong Kong number."

- Through Carriers with state certification or FCC license and can give them PSTN access
 - LECs (CLEC or ILEC)
 - FCC noted that CLEC utilization went up nationally from June 2004 to Dec 2004 when the CLEC industry was considered to be shrinking.
 - Recent activity involving rural ILECs in areas without pooling
 - Paging Cos
 - Do not pool per FCC order
 - Many rate centers in urban areas in which paging carrier do not yet have numbers.
 - Some activity noted in this area
 - Wireless Cos
 - No specific activity noted here
 - Cable Cos
 - No specific activity noted here

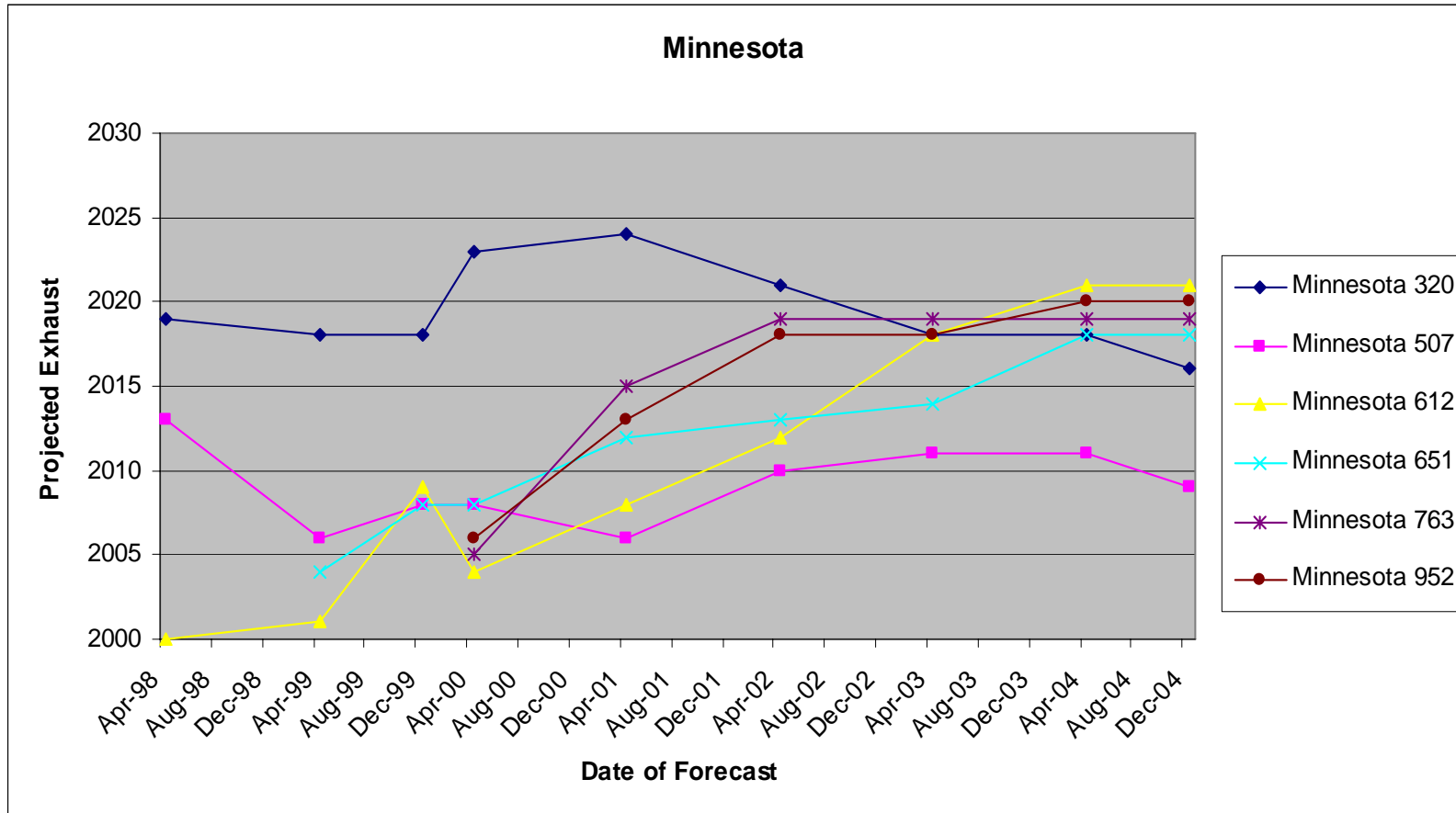
- To some extent through their facilities-based carrier
 - NRUF
 - Numbers given to VoIP providers cannot not necessarily be identified.
 - Often carriers treat VoIP provider like a customer, recording 100% utilization.
 - Cannot readily identify VoIP number holdings or VoIP number utilization.
 - Pooling participation is voluntary
 - May get numbers outside of number pooling
 - In pooling areas via dedicated customer request or through a paging co.
 - In non-pooling areas through any serving carrier
 - LNP participation is voluntary but many allow it.

VoIP Effect: Will VoIP Cause Area Code Exhaust?

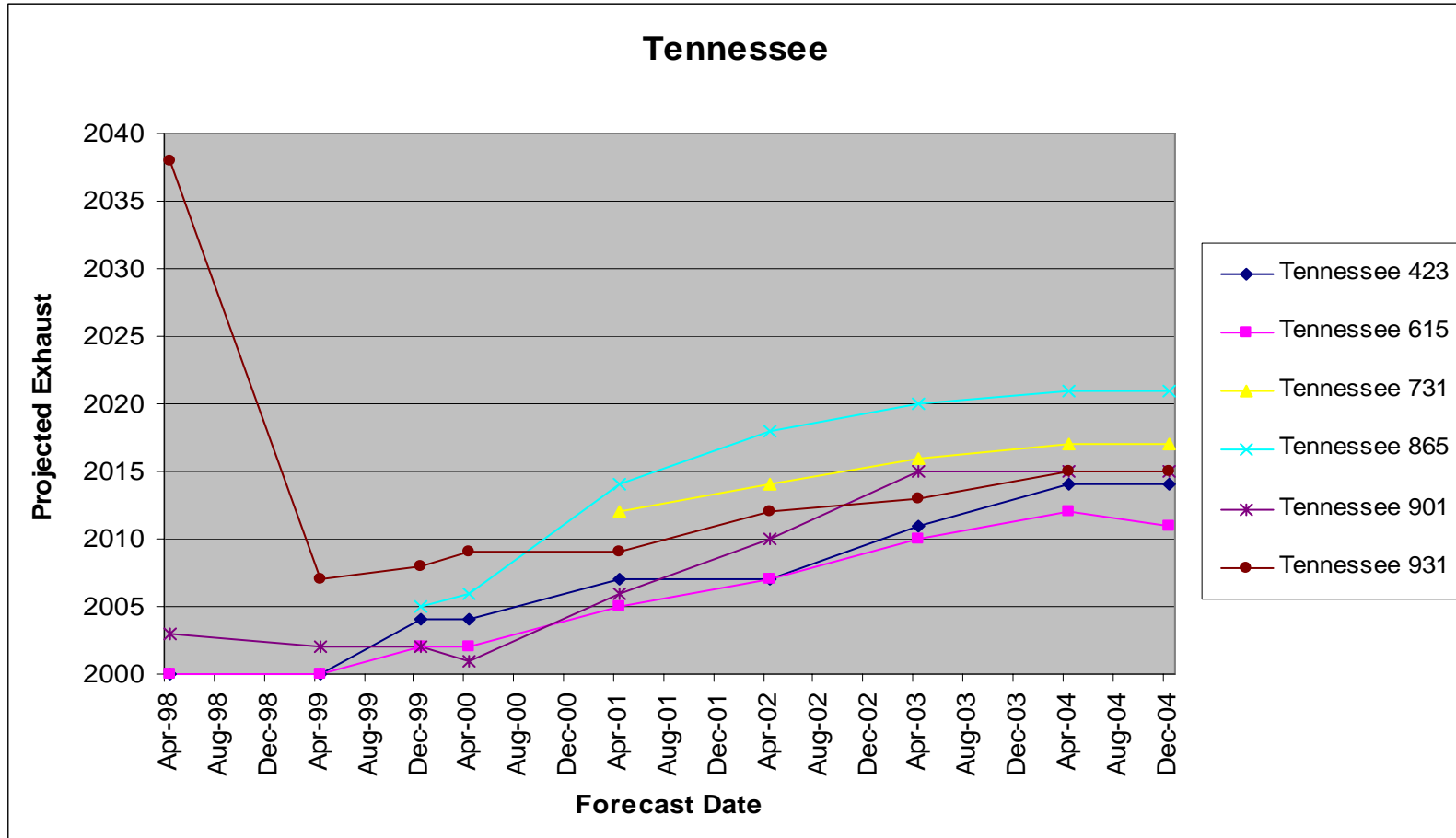
- We think VoIP has begun to drive noticeable demand
 - But reality is that we do not know how many numbers they have, what they have assigned, or what they forecast using in the future.
- With the exception of SBC-IS
 - As of early last year, SBC-IS received permission from FCC to get numbers directly from NANPA and PA
 - Had to commit to abiding by number conservation, including pooling, NRUF, and LNP.
 - Me-too petitions for direct access still pending

NeuStar Presentation from 2005 Winter
NARUC Consumer Affairs Committee

Numbering Tomorrow: Is It Time to Take a Closer Look at Conservation?



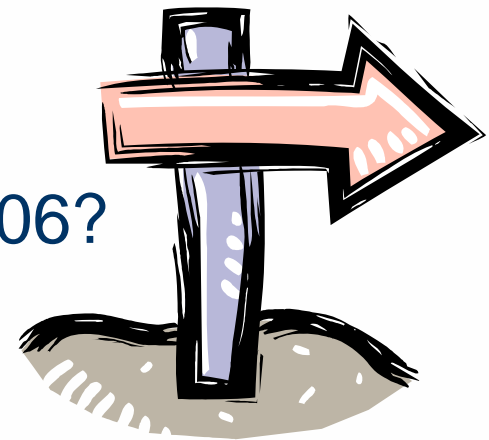
Numbering Tomorrow: Is It Time to Take a Closer Look at Conservation?



On Number Conservation and Area Code Exhaust:

No need to start filling sandbags, but it might be a good idea to watch the water levels.

What about 2006?



Area Codes Exhaust within 36 Mos

2000: 128

2001: 114

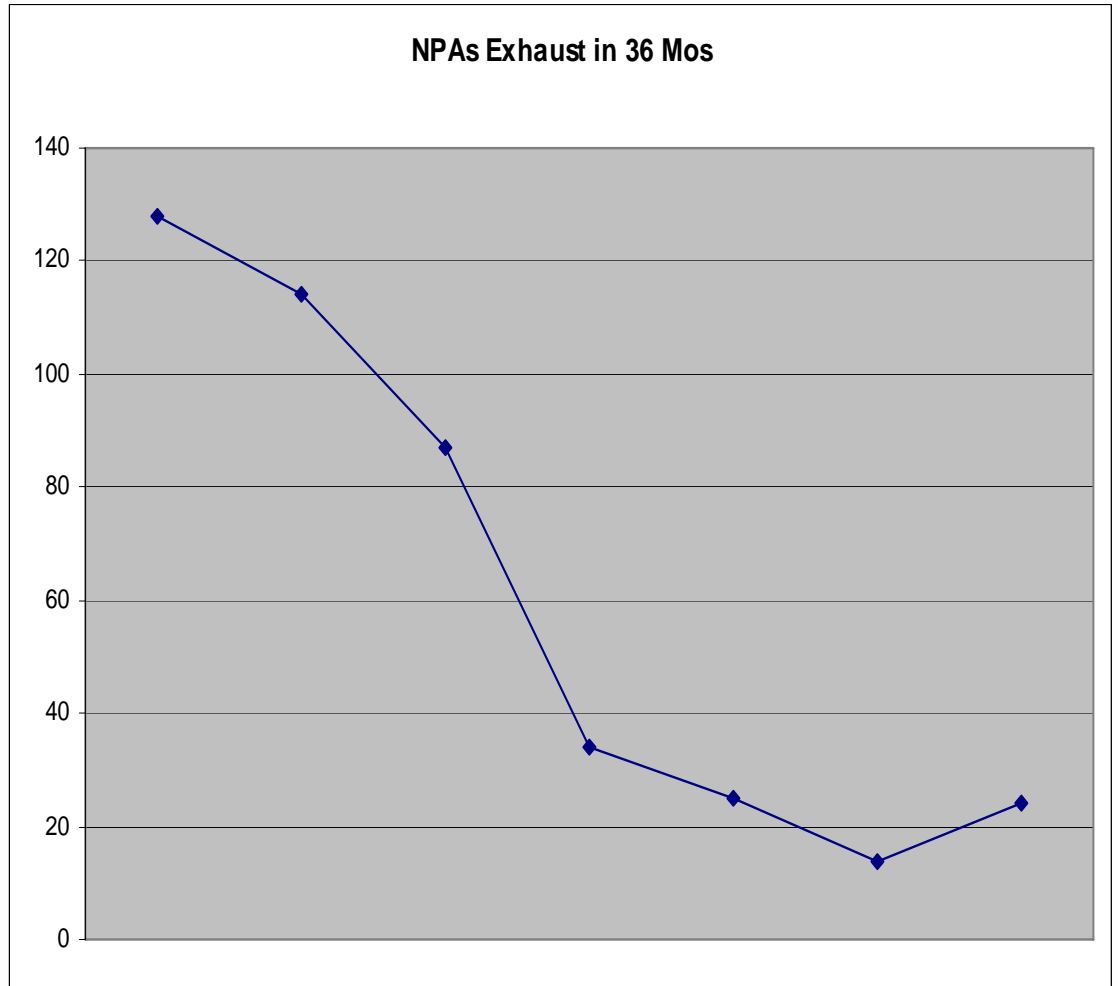
2002: 87

2003: 34

2004: 25

2005: 14

2006: 24



Actual Assignments

2000: 15,027

2001: 10,398

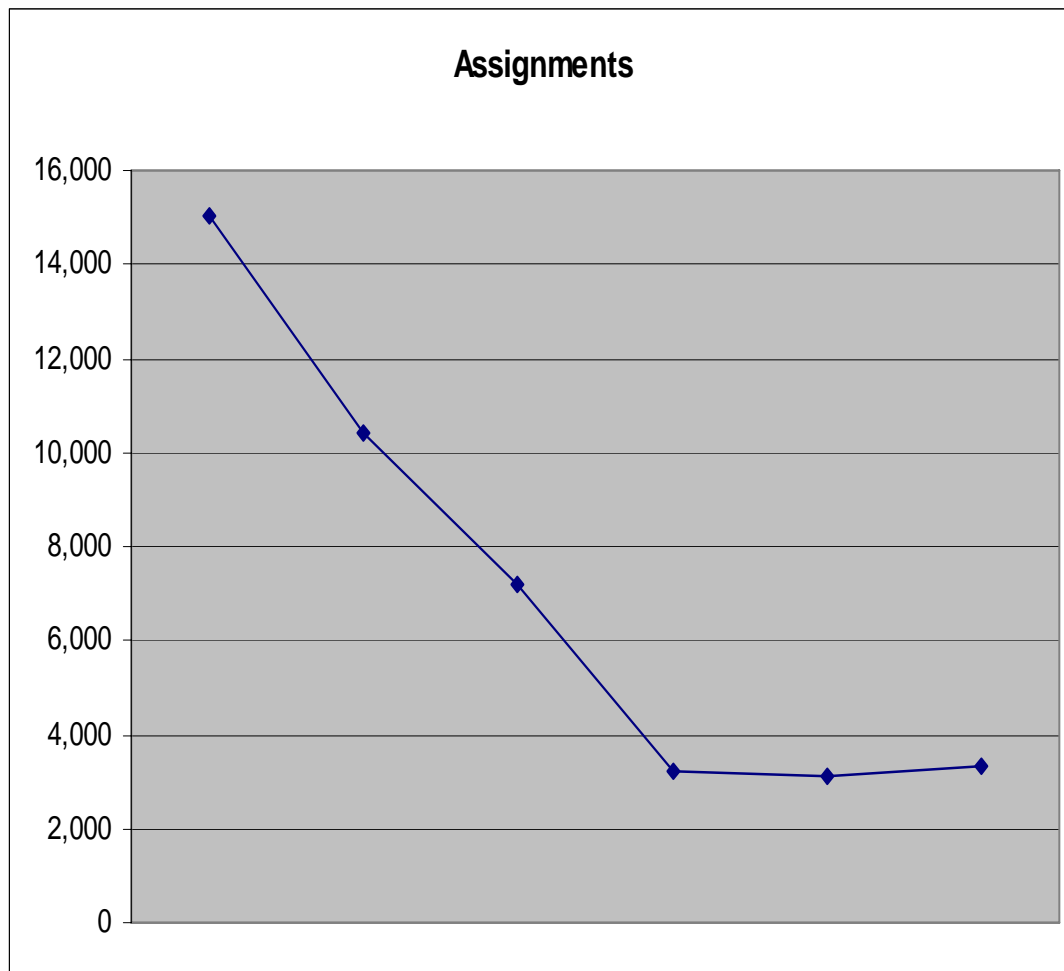
2002: 7,178

2003: 3,245

2004: 3,128

2005: 3,312

**January 2006 NANPA Prefix assignments approx 430. 2nd highest number of assignments in last 12 mos.*



Net Assignments*

2000: 11,283

2001: 4,342

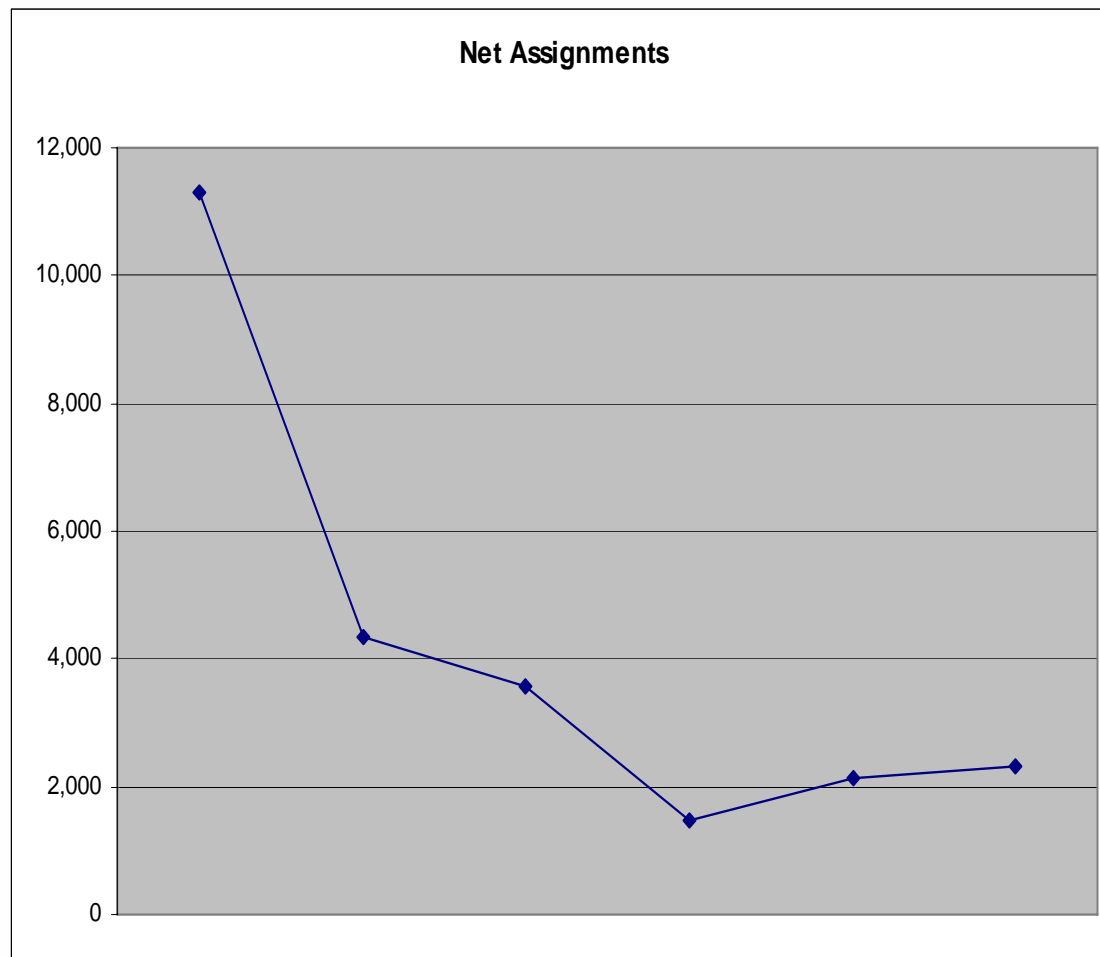
2002: 3,574

2003: 1,457

2004: 2,144

2005: 2,307

**assignments minus returns*



Prefixes for Pool Replenishment*

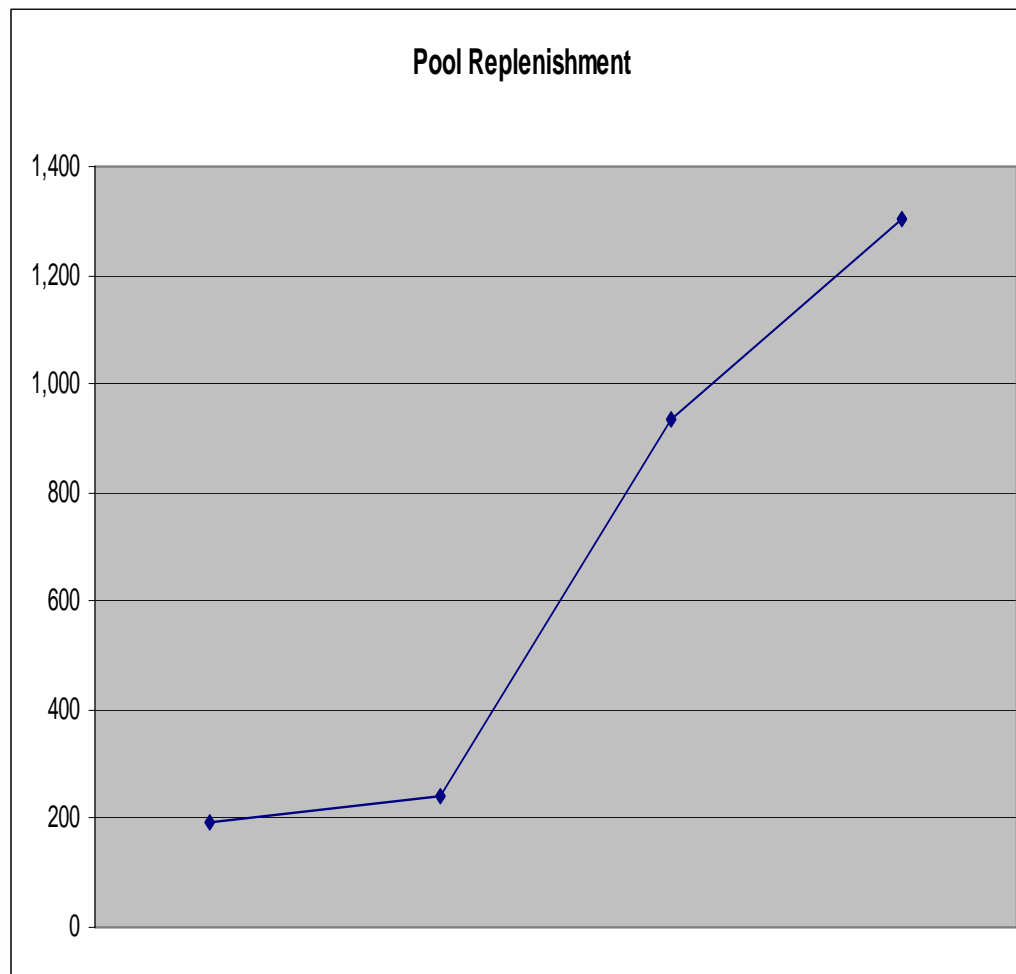
2002: 194

2003: 240

2004: 933

2005: 1,305

**from PA 2004 Annual Report
and Jan 2006 NANC report*



Thousand Block Assignments*

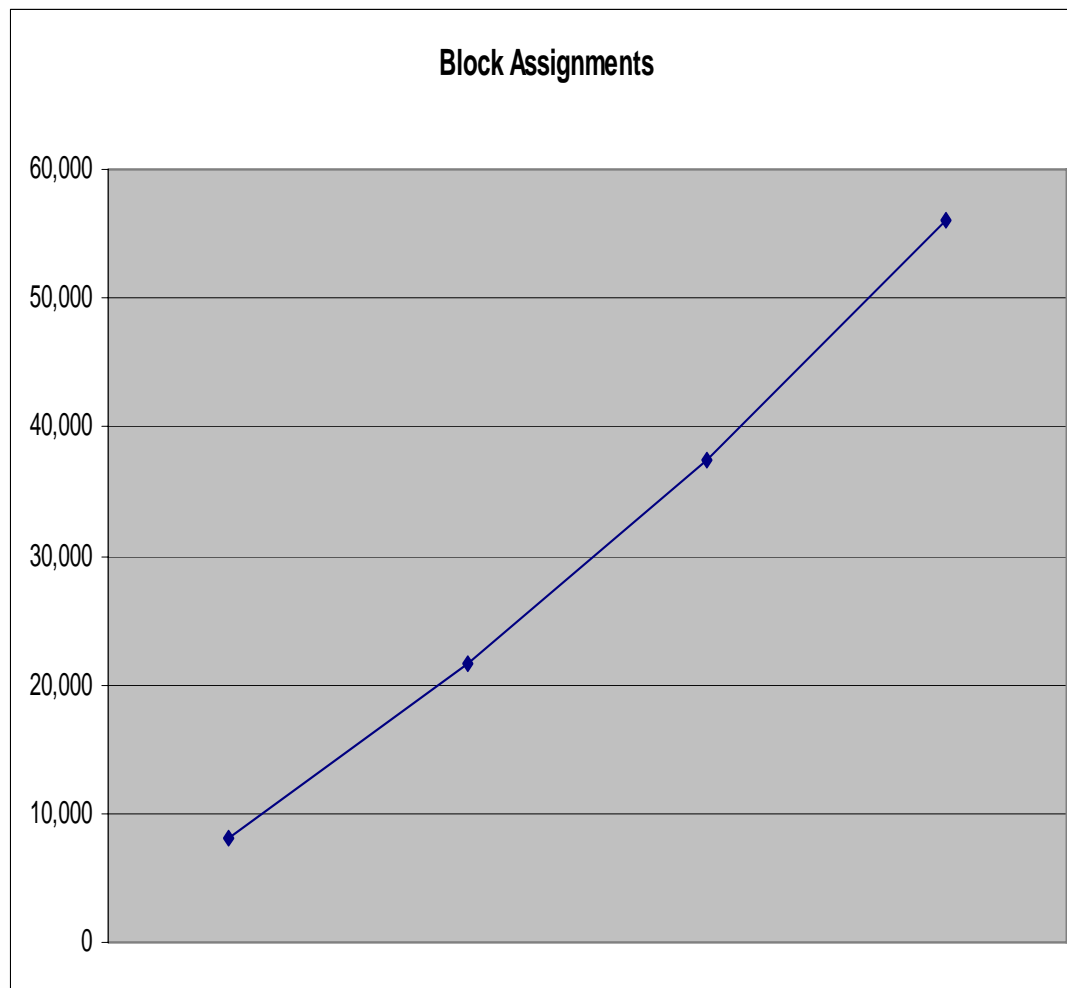
2002: 8,102

2003: 21,650

2004: 37,403

2005: 55,990

**from PA 2004 Annual Report
and Jan 2006 NANC report*



On Number Conservation and Area Code Exhaust:

We can't say for certain why, but it appears that the water levels are rising, so let's look into it.

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